

STATE WATER RESOURCES CONTROL BOARD

PUBLIC HEARING

CALIFORNIA DEPARTMENT OF FISH AND GAME'S
LOWER YUBA RIVER FISHERIES MANAGEMENT PLAN

AND A COMPLAINT BY

THE UNITED GROUP AGAINST YUBA COUNTY WATER AGENCY
AND OTHER DIVERTERS OF WATER FROM THE LOWER YUBA RIVER
IN YUBA COUNTY

PAUL R. BONDERSON BUILDING
SACRAMENTO, CALIFORNIA

TUESDAY, FEBRUARY 22, 2000

9:00 A.M.

REPORTED BY:

ESTHER F. WIATRE
CSR NO. 1564

CAPITOL REPORTERS (916) 923-5447

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BOARD MEMBER:

ARTHUR BAGGETT

COUNSEL:

DANIEL N. FRINK, ESQ.

STAFF:

ALICE LOW
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ERNEST MONA
ENGINEER

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SACRAMENTO, CALIFORNIA

TUESDAY, FEBRUARY 22, 2000, 9:00 A.M.

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HEARING OFFICER BROWN: Good morning.

This is the time and place for the supplement hearing on behalf of the California Department of Fish and Game's Lower Yuba River Fishery Management Plan and a complaint by the United Groups against Yuba County Water Agency and other parties to divert water from the Lower Yuba River in Yuba County. This hearing is being held in accordance with a Notice of Public Hearing dated December 21st, 1999.

I am John Brown, a Member of the State Water Resources Control Board, and I will serve as the Hearing Officer for this matter. I will be assisted today by my fellow Board Member, Mr. Art Bagget; Alice Low, Staff Environmental Specialist; Ernest Mona, staff engineer; Dan Frink, staff counsel. And Esther with Capitol Reporters is copying the proceeding. If you want a copy of the proceeding, check with Esther later on in the day.

The purpose of this supplement hearing is to receive relevant, new information which was not available at the time of the 14-day hearing in 1992 and which should be considered by the State Water Resources Control Board prior to adoption of a decision.

The State Board wants to receive information regarding

1 the condition of the fishery and other public trust
2 resources of the Lower Yuba River, the effects that Yuba
3 River Development Project facility and other diversions from
4 the Lower Yuba River may have on the resources. Appropriate
5 revisions to related rights permits and licenses and changes
6 in water diversion structures and practices needed to
7 protect the fishery and other public trust resources.

8 The State Water Resources Control Board's decision on
9 these subjects will be based on the combined record of the
10 1992 proceeding and this supplement hearing. This hearing
11 will afford the parties who have filed a Notice of Intent to
12 Appear an opportunity to present new evidence that addresses
13 the issues in the hearing notice.

14 After the hearing record has been compiled and staff
15 recommendations are considered, the full membership of the
16 State Water Resources Control Board will make a decision.
17 After the State Water Resources Control Board adopts the
18 decision, any person who believes that decision is in error
19 will have 30 days within which to submit a written petition
20 for reconsideration by the Board.

21 In addition to the evidentiary presentation, the public
22 is invited to make brief, nonevidentiary policy statements
23 regarding the issues under consideration.

24 Our order of proceeding at this hearing will be to
25 begin with nonevidentiary policy statements. Next we will

1 proceed to introduction of staff exhibits, followed by the
2 evidentiary presentations of the parties who exchanged
3 written testimony and exhibits prior to the hearing. Copies
4 of the list showing the expected order of the parties'
5 evidentiary presentations are available at the front table.

6 Before proceeding with policy statements, I would like
7 to ask the representative of parties who will be presenting
8 evidence to identify themselves and whom they represent.

9 Will the representatives of those parties who intend to
10 present evidence in this proceeding please stand, state your
11 name, address and whom you represent so that the Court
12 Reporter can enter the information into the record.

13 Will the person representing the National Marine
14 Fisheries Service please stand. First give your name.

15 MR. EDMONDSON: I am Steve Edmondson, the National
16 Marine Fisheries Service.

17 H.O. BROWN: Steve Edmondson?

18 MR. EDMONDSON: Yes.

19 H.O. BROWN: Spell your last name, Steve.

20 MR. EDMONDSON: E-d-m-o-n-d-s-o-n.

21 H.O. BROWN: United States Department of Interior.

22 MR. GEE: Edmund Gee appearing on behalf of the
23 Department of the Interior.

24 H.O. BROWN: California Sportfishing Protection
25 Alliance.

1 MR. BAIOCCHI: Bob Baiocchi. I am the agent for
2 California Sportfishing Protection Alliance. My mailing
3 address is P.O. Box 1790, Graeagle, California 96103.
4 H.O. BROWN: Thank you.
5 South Yuba Citizens League.
6 MR. SANDERS: Lawrence Sanders representing SYRCL, 216
7 Main Street, Nevada City, California.
8 H.O. BROWN: And Mr. Walter Cook representing himself.
9 MR. BAIOCCHI: Mr. Brown, Walter Cook is on the way.
10 He hasn't arrived yet. He may be here a little bit late,
11 early this afternoon.
12 H.O. BROWN: Thank you, Mr. Baiocchi.
13 Yuba County Water Agency.
14 MR. LILLY: Good morning, Mr. Brown. Alan Lilly, of
15 Bartkiewicz, Kronick & Shanahan, 1011 Twenty-Second Street,
16 Sacramento, California 95816, representing the Yuba County
17 Water Agency. And with me here this morning is Donn Wilson,
18 the Agency's Engineer Administrator and Curt Aikens, the
19 Assistant Administrator.
20 H.O. BROWN: Is that with a K or C, Curt?
21 MR. AIKENS: With a C.
22 H.O. BROWN: South Yuba Water District.
23 MR. MINASIAN: Paul Minasian, P.O. 1679, Oroville,
24 California 95965.
25 H.O. BROWN: Cordua Irrigation District.

1 MR. MINASIAN: Morning, Board Members, again, Paul
2 Minasian.

3 H.O. BROWN: Brophy Water District.

4 MR. GALLERY: Dan Gallery, Mr. Chairman, 926 J Street,
5 Sacramento 95814.

6 H.O. BROWN: Thank you.
7 Browns Valley Irrigation.

8 MR. BEZERRA: Mr. Brown, my name is Ryan Bezerra,
9 Bartkiewicz, Kronick & Shanahan, 1011 Twenty-Second Street,
10 Sacramento, California 95816. We represent Browns Valley.

11 H.O. BROWN: Western Water Company.

12 MR. MORRIS: Morning, Mr. Brown. Scott Morris from
13 Kronick, Moskovitz, Tiedmann & Girard, 400 Capitol Mall,
14 27th Floor, Sacramento 95814.

15 H.O. BROWN: Thank you.
16 California Department of Fish and Game.

17 MR. CUNNINGHAM: Morning, Mr. Brown, William
18 Cunningham, Deputy Attorney General, 1301 I Street,
19 Sacramento, California.

20 H.O. BROWN: Morning.
21 California Department of Water Resources.

22 MR. SANDINO: David Sandino, 1416 Ninth Street, Room
23 204-6. ZIP code, Sacramento 94236-001.

24 H.O. BROWN: Thank you.
25 The gentleman standing with the sweater.

1 MR. GOTHROW: Dave Gothrow, manager Linda County Water
2 District, 1280 Scale Street, Marysville, California 95901.

3 H.O. BROWN: Do you spell your last name --

4 MR. GOTHROW: G-o-t-h-r-o-w.

5 MR. FRINK: Excuse me, sir, I didn't hear whom you
6 represented.

7 MR. GOTHROW: I represent the Linda County Water
8 District.

9 H.O. BROWN: Linda County?

10 MR. GOTHROW: Linda County.

11 H.O. BROWN: The handsome man with the suspenders.

12 MR. GRAHAM: Thank you, Mr. Brown. I am Don Graham. I
13 represent Reclamation District 784 in Yuba County and myself
14 as a Yuba County citizen. 1049 Anderson Avenue, Marysville,
15 California 95901.

16 H.O. BROWN: Thank you, Mr. Graham.

17 And the other gentleman.

18 MR. GILBERT: I am John Gilbert, President of Dry Creek
19 Mutual Water Company, representing the Dry Creek Mutual
20 Company. My address is 15 Pleasant Grove Road, Wheatland,
21 California, 95692.

22 H.O. BROWN: Which water company?

23 MR. GILBERT: Dry Creek Mutual Water Company.

24 MR. FRINK: Mr. Chairman, I just wanted to clarify. I
25 believe that the last three speakers intend on making policy

1 statements; is that correct?

2 UNIDENTIFIED VOICE: Yes.

3 MR. FRINK: They were not included on the list of
4 parties who intended to present evidence.

5 H.O. BROWN: Thank you for clarifying that, Mr. Frink.

6 We will now hear from any speakers who wish to make a
7 nonevidentiary policy statement. Policy statements may
8 include views of the speaker as well as nonexpert comments.
9 Policy statements are subject to the following provisions:

10 Persons making a nonevidentiary policy statements will
11 not be sworn or asked to affirm the truth of their
12 statements. Persons making policy statements must not
13 attempt to use their statements to present factual evidence,
14 either orally or by introduction of written exhibits. At
15 the discretion of the Hearing Officer questions may be
16 addressed to persons making policy statements for the
17 purpose of clarifying their statements. However, persons
18 making policy statements are not subject to
19 cross-examination.

20 Policy statements will be limited to ten minutes or
21 less. If you wish to make a policy statement and haven't
22 already done so, we would like you to fill out a blue card.

23 Who has the blue cards?

24 MR. MONA: There are some right up here and some
25 outside.

1 H.O. BROWN: Anybody need a blue card wishing to make a
2 policy statement that hasn't filled one out?

3 The first policy statement will be from Mr. Banky
4 Curtis.

5 Mr. Curtis.

6 MR. CURTIS: Good morning. My name is Banky Curtis. I
7 am Regional Manager for the Sacramento Valley Central Sierra
8 Region of the California Department of Fish and Game.

9 Members of the Board and Mr. Brown, I am pleased and
10 honored to appear before you on this very important matter.
11 Our department appreciates your willingness to consider this
12 complex and controversial matter. We believe, as I am sure
13 you do, that this river system and the associated public
14 trust resources are extremely important to the people of the
15 state of California.

16 As you may know, the California Department of Fish and
17 Game has been designated by the State Legislature as a
18 trustee agency for the public trust resources of the State
19 of California. We take this responsibility very seriously,
20 and we're committed to protecting all those resources to the
21 best of our ability.

22 It is our intent to provide testimony that will provide
23 you with information to help you render a decision that will
24 provide protection for all of those public trust resources.

25 In addition, the California Department of Fish and Game

1 has received specific direction from the State Legislature
2 on several issues. We have been directed to undertake major
3 efforts to restore salmon, steelhead and anadromous fish.
4 That is found in the Salmon, Steelhead, Anadromous Fish
5 Program Act. And further that we develop a plan and a
6 program to double the natural population of salmon and
7 steelhead trout resources and existing natural salmon and
8 steelhead habitat shall not be further diminished.

9 We believe it is essential that the Yuba River system
10 be an integral part of any program to meet these legislative
11 mandates. You have asked that our testimony be limited to
12 new information obtained since your last hearing on the Yuba
13 River. We intend to comply with that request.

14 One of the most notable items we will address is the
15 change of status of two fish species found in the Yuba River
16 as they relate to the state and federal Endangered Species
17 Act. The spring-run salmon in the Sacramento Valley has
18 been state and federally listed as threatened, and steelhead
19 in this area has been federally listed as threatened.

20 We believe that these listings make it imperative that
21 adequate flows, temperatures, change in flow requirements
22 and state-of-the art screens on water diversions are
23 implemented to protect these species in this system. We
24 believe that it is essential that your decision be in full
25 compliance with the California Endangered Species Act and

1 the federal Endangered Species Act.

2 We intend to provide you with the information necessary
3 to make such a decision. Our testimony will specifically
4 address the following:

5 Water temperature for adult spring-run emigration and
6 over summering, flow reductions during the spring spawning,
7 incubation and emergence, water temperatures below Daguerre
8 Point Dam to protect rearing and out-migrating juvenile
9 steelhead trout, adult salmonid passage at Daguerre Point
10 Dam, changes in fish screening and the need for adequate
11 fish screens on water diversions, measures necessary to
12 protect and maintain the recently listed chinook salmon and
13 steelhead.

14 Our specific recommendations will include the
15 following:

16 During the period from October 1 through June 30, the
17 water temperature shall be maintained at 56 degrees at
18 Daguerre Point Dam and 60 degrees at the Marysville gauge to
19 protect spring-run, fall-run and steelhead.

20 Flows occurring on September 1 should be maintained
21 thereafter to prevent dewatering of redds, loss of
22 incubating eggs and emerging spring-run chinook.

23 Flow reductions of not more than 300 cfs could occur
24 with additional refinement of acceptable reductions.

25 Fish screens meeting current Department of Fish and

1 Game National Marine Fisheries Service criteria should be
2 maintained at all diversions, especially the Hallwood-Cordua
3 and South Yuba diversions.

4 Improved passage at Daguerre Point Dam during the adult
5 spring-run chinook salmon and steelhead trout emigration
6 periods.

7 We also believe that the Draft Decision issued by the
8 Board provides significant improvements in flows,
9 temperatures and resultant habitat conditions for anadromous
10 fish in the Lower Yuba River over those provided by the 1965
11 Agreement. We strongly recommend that the conditions in
12 that decision be implemented immediately. While we agree
13 there may be areas that merit further study, those studies
14 should be conducted after the conditions of the Draft
15 Decision are implemented.

16 In summary, it is our position that the listing of
17 spring-run chinook salmon and the steelhead are significant
18 changes that require additional consideration by the Board
19 and that further measures are needed to provide necessary
20 protection. We also believe the Draft Decision makes
21 substantial improvements in the conditions for many aquatic
22 species and should be implemented immediately. It is also
23 our position that the decision of this Board must be in
24 compliance with the state and federal Endangered Species
25 Act.

1 Thank you very much for the opportunity to
2 participate.

3 H.O. BROWN: Thank you, Mr. Curtis.
4 Mr. Tib Belza.

5 MR. BELZA: Good morning, Mr. Chairman, Board Members,
6 staff and ladies and gentlemen. My name is Tib Belza.

7 Except for my years at U.C. Davis, I have lived my
8 entire live in Yuba County. I have been Yuba County
9 Director since 1989. In 1991, '92, '98 and '99 I was
10 chairman of that board. From 1989 through 1992 I was a
11 member of the Yuba County Board of Supervisors and I was
12 chairman of that board in 1990.

13 I have been on the Board of Directors for Northern
14 California Water Agencies since it was formed in 1992, and I
15 was chairman of NCWA from 1992 to 1998. I currently serve
16 on the Bay-Delta Advisory Council and have been since its
17 inception in 1994.

18 I testified before this body during the State Water
19 Resources Control Board's 1992 Lower Yuba River hearing and
20 I participated in last week's field investigation.

21 During the 1992 hearing, I testified in detail about
22 the Yuba County Water Agency's concerns about the Lower Yuba
23 River Fishery Management Plan that the California Department
24 of Fish and Game issued in 1991. Our basic concern was that
25 the proposed instream flow and water temperature

1 requirements in that plan would have required the Agency to
2 release huge amounts of water from New Bullards Bar
3 Reservoir to flow down to the Yuba River past Marysville,
4 and, as a result, the farmers of Yuba County that depend on
5 Yuba River water would have suffered huge deficiencies in
6 their water supplies.

7 Unfortunately, the Draft Decision issued by State Water
8 Resources Control Board staff last year raises the same
9 concerns. The hydrological modeling work of the Agency's
10 consultants and the independent hydrological analysis by
11 the Department of Water Resources' engineers both confirm
12 that the instream flow requirements in the Draft Decision
13 would have many substantial negative impacts on water users
14 in Yuba County. These impacts would be much worse if the
15 State Board were also to adopt the proposed temperature
16 standards in the Draft Decision.

17 These proposals are particularly frustrating to the
18 Agency because they seek to use water from New Bullards Bar
19 Reservoir to optimize fish habitat in Lower Yuba River, even
20 though New Bullards Bar Reservoir never had any substantial
21 adverse impacts on the fish in the lower river. In fact,
22 New Bullards Bar Reservoir actually has substantially
23 improved conditions for these fish by increasing summer
24 flows and reducing summer water temperatures.

25 During the 1992 hearing, Yuba County administrator Fred

1 Morawczinski testified in detail about the extremely
2 depressed and social and economic conditions in Yuba County
3 and the importance of reliable agricultural water supplies
4 to Yuba County's economy. Mr. Morawczinski explained how
5 curtailed surface water supplies would lead to reduced
6 agricultural production which in turn would lead to reduced
7 employment, reduced spending, continue to increase poverty,
8 reduce property tax and sales tax revenue, lack of economic
9 growth and continued high rates of crime, drug abuse and
10 domestic violence.

11 Unfortunately, these extremely poor economic
12 conditions continue to exist in Yuba County today, despite
13 the recent economic boom that much of the rest of
14 California has seen. Yuba County's employment rate of 15.6
15 percent still is one of the highest in California and even
16 one of the highest in the United States. Per capita income
17 in Yuba County ranks 53rd out of California's 58 counties.
18 Since 1992 Yuba County's agriculture has increased its use
19 of surface water supplies from the Yuba River, the recent
20 completion of Dry Creek Mutual Water Company's surface water
21 delivery system added 4,700 acres to Yuba County's acreage
22 that is irrigated from the Yuba River. Wheatland Water
23 District is developing a system that will irrigate an
24 additional 16,000 acres of farmland in Yuba County.

25 An adequate surface water supply remains the key for

1 economic recovery in Yuba County. If the State Water
2 Resources Control Board were to adopt a decision that would
3 cause substantial deficiencies in the Agency's delivery to
4 its customers, then the economic picture in Yuba County
5 would be bleak and there would no hope for any sustained
6 economic recovery.

7 As a Yuba County native who has spent many days boating
8 and fishing on the Lower Yuba River, I also can attest to
9 the importance of a viable Lower Yuba River fishery for the
10 County. The key here is balance. Neither the 1991
11 Department of Fish and Game plan nor the State Board's Draft
12 Decision would lead to a reasonable balance amongst the
13 competing uses of Yuba River water. Instead, these
14 proposals would unreasonably and unfairly sacrifice Yuba
15 County agriculture in an attempt to optimize fish habitat.

16 Fortunately there is a solution. The solution is the
17 proposal that has been developed by the Agency's consultants
18 and that they will explain in detail during this hearing.
19 This proposal would continue to maintain fish in the Lower
20 Yuba River in good condition and also would leave adequate
21 supplies for the water users in Yuba County that depend on
22 the Yuba River water. I urge you to adopt the Yuba County
23 Water Agency's proposed flow requirements.

24 And I think one thing that we have learned, and it is
25 important that we are able to put in new information in this

1 hearing, and we appreciate the opportunity to do that. And
2 one of the best bits of information we can look at is that
3 since 1992 to now, the year 2000, with no edict from any
4 court, no proposal, simply a cooperative effort between the
5 Agency and the various agencies that we have to work with to
6 improve the health of the fishery in Yuba County, I think we
7 can see that the record stands for itself. And I hope that
8 you will look at that record with an open mind and I
9 appreciate the time to speak today.

10 Thank you.

11 H.O. BROWN: Thank you, Mr. Belza, and thank you again
12 for hosting the tour for all us last week.

13 Mr. Cliff Schulz.

14 MR. SCHULZ: Morning.

15 H.O. BROWN: Morning, Mr. Schulz.

16 MR. SCHULZ: I am Cliff Schulz, appearing today on
17 behalf of the Water Contractors. We are not parties in this
18 proceeding and hoped that we would not have to be, and still
19 hope we will not have to be.

20 I am here for one purpose only. And that is when the
21 testimony was received in early February, we found that
22 Exhibit S-YCWA 22 was a change petition which was put in for
23 the purposes of authorizing a water transfer of the water
24 that might come down the Yuba River as a result of this
25 proceeding. And Yuba Exhibit S-YCWA 11, the testimony of

1 Donn Wilson, around Pages 9 and 10 refers to this.

2 Now up until that time, the State Water Contractors had
3 no idea that this issue might be before the Board in this
4 proceeding. Why I am here this morning is to ask
5 clarification as to whether the Board is going to consider
6 the petition to transfer as part of this proceeding. I have
7 never seen a transfer petition come into a hearing like this
8 as an exhibit, possibly, therefore, bringing issues that
9 would otherwise be considered in a separate proceeding on
10 the transfer petition into this hearing.

11 I have heard from your staff that the transfer petition
12 itself has been sent over to your -- whatever it is,
13 whatever section of the State Board that handles those, and
14 there will be a separate notice on that. Nevertheless, we
15 are concerned whether or not in rendering the decision in
16 this matter the Board might make determinations which go to
17 the question of whether those flows once they leave the
18 mouth of the Yuba River stay in control of the Agency and
19 constitute water available for transfer.

20 This is a very difficult mixed issue of law and fact.
21 It could depend on whether or not the water that you require
22 as additional natural flow to be passed through or releases
23 of stored water. It could turn on the question on whether
24 the water is required to be released for mitigation purpose.
25 If it is mitigation requirement then that raises questions

1 of whether water temporarily stored and later restored for
2 fishery purposes ever becomes water appropriated by the Yuba
3 County Water Agency for consumptive uses. There is question
4 of how they maintained control, which you are required to do
5 under the Water Code. And there would be questions as to
6 why this water would be treated differently in terms of
7 transferability to the water they currently put down the
8 system for fishery purposes.

9 So, my appearance for the State Contractors today is to
10 try not to be in this proceeding and not to have to
11 participate and ask for a late right to come in and
12 cross-examine witnesses and put in briefs. We would ask
13 that this proceeding not consider the questions of the
14 status of the water once it leaves the mouth of the Yuba.
15 We don't see that as something that is relevant to the
16 question of what are the fishery needs on the river.

17 I know that Yuba has probably put it in because they
18 want that third issue that you read off this morning as what
19 permit terms and conditions should be placed in order to do
20 the fishery protection actions. But, again, I don't see how
21 that particular issue requires you to decide what the status
22 of the water is once it leaves the Yuba.

23 We hope that that will be considered in a separate
24 proceeding on the transfer petition and would ask the Board
25 to clarify the extent to which that transfer issue will be

1 at issue in this proceeding.

2 H.O. BROWN: Thank you, Mr. Schulz.

3 Perhaps, Mr. Frink, you can address that in your
4 opening remarks or someplace later on in the day.

5 MR. FRINK: Okay.

6 MR. LILLY: Mr. Brown, just for the record, before the
7 State Board renders a clarification on that issue, we would
8 like to be heard on that issue, as well.

9 H.O. BROWN: All right, Mr. Lilly.

10 The next card is Mr. Donald Graham.

11 MR. GRAHAM: Mr. Chairman, I thank you very much for
12 the opportunity to appear before the Board today. I am Don
13 Graham. I have been a resident of Yuba County for 35
14 years and have been a board member of Reclamation District
15 784 these past four years, and I am a survivor of the 1997
16 New Year's flood.

17 Reclamation District 784 has the maintenance
18 responsibilities for 37 miles of the state's levees along
19 the Yuba and Feather Rivers. These levees protect the
20 communities of Olivehurst, Linda, Arboga and the surrounding
21 land.

22 In 1998 the Army Corps of Engineers identified that the
23 population and property at risk to flooding is 14,900 people
24 and \$404.6 million of property. In addition to levee
25 services, the Reclamation District is responsible for

1 providing drainage to 30,000 acres of land. Overall, we are
2 one of five reclamation and levee districts responsible for
3 levee services that provide flood protection to the
4 low-lying population and property in Yuba County.

5 Yuba County has a high risk of flooding because the
6 Yuba River runs through the middle of the county and the
7 Feather River runs along the western boundary. Today, the
8 Yuba River has the least amount of dedicated flood storage
9 space compared to its total runoff of any Central Valley
10 river.

11 History has shown that the Yuba and Feather Rivers are
12 capable of killer floods. Since 1950 over 40 lives have
13 been lost in the area. Over one-half of the Yuba River
14 watershed is now uncontrolled for flood flows. Since the
15 completion of Oroville Dam on the Feather River and the New
16 Bullards Bar on the Yuba, there have been two major floods
17 within Reclamation District 784. In the 1986 and the 1997
18 floods four people lost their lives. Over 5,000 homes and
19 businesses were damaged or destroyed with the cost of the
20 damages being in the \$250,000,000 range.

21 Yuba County has made significant steps towards improved
22 flood protection only because of the Yuba County Water
23 Agency's leadership and financial resources. The Agency
24 built the New Bullards Bar Dam that provides the only
25 dedicated flood storage space on the entire Yuba River

1 system. Then it initiated a flood control study with the
2 Corps of Engineers. It initiated its own studies and paid
3 for local share of flood projects. Since 1986, the Yuba
4 County Water Agency has invested about \$10,000,000 and
5 committed even more millions of dollars in flood protection
6 efforts.

7 Of these dollars Reclamation District 784 has been the
8 beneficiary of 3.7 million in grants and 1.2 million in
9 loans for levee repairs and improvements. Even with these
10 efforts, we have one of the lowest, if not the lowest, level
11 of flood protection for a large populated area in the
12 state. After the 1997 flood the Army Corps of Engineers
13 recalculated the flood frequency curve for the Yuba and
14 Feather Rivers. The result is that a flood within
15 Reclamation District 784 is 40 percent more likely to occur
16 than previously calculated.

17 Even with the completion of the Corps' Yuba Basin Flood
18 Control Project, our flood risk is way too high. The 15,000
19 people and their \$400,000,000 in property protected by
20 Reclamation District 784 maintained levees have a 72 percent
21 higher chance of flood damage than the chance of a house
22 fire in Sacramento.

23 I am thoroughly convinced that without the Yuba County
24 Water Agency we would not been able to afford the local
25 share of dollars to make these flood protection

1 improvements. The Agency has been the sole source of local
2 share funding for those projects.

3 Yuba County is one of the poorest counties in the state
4 with consistently high unemployment and does not have the
5 financial resources for these investments. As supporting
6 evidence of this, our more prosperous Sutter County
7 neighbors who have a similar risk have not been able to
8 raise the \$2.6 million for the local share flood control
9 projects which are all ready to go.

10 The Yuba County Water Agency has been able to afford
11 providing these flood protection funds because of the water
12 transfers from the New Bullards Bar Reservoir.

13 It seems to me, Mr. Chairman, that these Lower Yuba
14 River proceedings threaten to take away this source of
15 funding. As I understand it, your task is to balance the
16 water need for the fishery and other beneficial uses. I
17 believe that your decision will also balance the prospects
18 for improved public safety. If the water Agency loses its
19 ability to make future water transfers, there will likely be
20 more lives lost and more property damaged.

21 I have also attached some pictures of the most recent
22 flood experience. The first picture relates to a U2
23 satellite photo that was taken directly over Marysville
24 before and during the flood period. You can see that
25 Marysville during high water times was nothing more than an

1 island cup. And in the following pictures you see the
2 helicopter hovering over my house and rescuing my wife and
3 me from the roof of our house as 12 feet of water swirled
4 around it.

5 In the center of the page is the Dana & Dana warehouse
6 with flood waters up to 20 feet deep surrounding it. You
7 see bins and swerved products and other agricultural
8 products floating in the water. What we don't see is the
9 millions of dollars of farm machinery that were contained
10 inside those buildings.

11 There is also a lumber mill, a molding mill, that was
12 seriously damaged and put out of business for several weeks
13 as well.

14 The bottom pictures are an upscale housing tract with
15 homes ranging from 250- to \$400,000 a copy, and you can see
16 the damage that occurred to those.

17 In conclusion, ladies and gentlemen, please don't
18 hinder the Yuba County Water Agency's ability to continue
19 its unselfish role of aiding the residents of Yuba County,
20 and I thank you for your time.

21 H.O. BROWN: Thank you, Mr. Graham.

22 David Sandino.

23 MR. SANDINO: Good morning, Mr. Brown, Members of the
24 Board, staff. My name is David Sandino, and I am appearing
25 on behalf of Department of Water Resources.

1 The department will not be submitting a case in chief
2 for this hearing. But we will be presenting as one witness
3 one of our engineers, Sushil Arora, who has asked to testify
4 at the request of the Board staff. He will be appearing as
5 a Board witness only and not as part of DWR's case. We also
6 intend to participate on cross-examination and rebuttal
7 where appropriate.

8 The main purpose of our opening statement today is to
9 let the Board know about our concerns related to the
10 proposed change of use and point of diversion submitted by
11 Yuba County Water Agency in part of its evidence packet.
12 The petition proposes that the new point of diversion as a
13 State Water Project Banks pumping plant and CVP Tracy
14 pumping plant and that the new place of use is State Water
15 Project and Central Valley Project service areas.

16 The petition has asked that Lower Yuba water released
17 for instream flow purposes be available for transfer once
18 the instream purpose on the tributaries are accomplished.

19 We agree with the comments of Mr. Schulz that the
20 merits of this petition should be heard in a separate
21 proceeding. We believe that the petition raises large
22 policy questions about the status of instream flow releases
23 all around the state. We also believe that the petition has
24 the potential to interfere with the water rights of the
25 Department of Water Resources because the petition proposes

1 to transfer water from the diversion of natural flow when
2 the water is needed to help meet Delta water quality
3 objectives. In other words, the water -- the petition
4 proposes to transfer water when term '91 conditions exist.

5 We believe that it would be appropriate for the Board
6 to clarify at the start of this proceeding the status of the
7 petition. We believe that the notice for this hearing did
8 not include the status of the water once it reaches the
9 Delta, and we believe it would be helpful if later on in the
10 proceedings the Board did include that statement in the
11 record that it was not noticed.

12 Thank you.

13 H.O. BROWN: Thank you, Mr. Sandino.

14 Next speaker is Mr. Charles Mathews.

15 Morning, Mr. Mathews.

16 MR. MATHEWS: Mr. Chairman, I am Charles Mathews, 8800
17 Mathews Lane, Marysville, California. I have been a
18 director of the Cordua Irrigation District since 1964, and
19 in the middle '80s I served two or three terms on the Yuba
20 County Water Agency as a representative of the irrigation
21 and reclamation districts north of Yuba River.

22 I would urge you to consider what the State Water
23 Project contractors and Department of Water Resources is
24 saying. When I came on the board -- excuse me, before we
25 came on the board Cordua Irrigation District and the

1 Hallwood and BVID were the only diverters out of Yuba River.
2 When the '76-77 drought came about, they had no carryover
3 storage from the year before, so they could not even meet
4 our basic water rights, let alone get us any supplemental
5 water. They used the theory that it was an act of God and
6 there was no water available.

7 After that time the irrigation districts and the
8 reclamation districts became more involved with the Agency.
9 We passed an act in the Legislature which appointed one
10 member of the water Agency from the north and one from the
11 south. At the time when I came on the board, which was in
12 the early '80s, the only income of Yuba Water County Agency
13 was the tax base from the county, and I believe it was in
14 the area of 60- to \$70,000. Out of that they had to pay
15 some David Grunsky money and the PG&E paid for the staff and
16 the running of Bullards Bar.

17 When I left the Agency approximately six years later,
18 they had many millions in their bank account, it was
19 primarily because we looked at the PG&E contract, and the
20 PG&E contract had different -- when the water was at a
21 certain level the PG&E could release water under only
22 certain conditions. When it was above a certain point, they
23 could release as much as they wanted. We were able to take
24 that position and, working with PG&E, we were able to
25 conserve water through reregulation. It was John T. Ring, a

1 member of the hydro committee that brought this up. John T.
2 Ring with Bookman and Edmondson worked with the State Water
3 Project contractors and the Department of Water Resources to
4 approve that the water we had was controlled water that the
5 Agency had control over. That was the source of the
6 income.

7 In the year later there was some objections from the
8 two previous speakers about the refill criteria, and we
9 wound up meeting the refill criteria. Basically, we could
10 only refill the dam on areas that we had sold water when the
11 Delta was, I believe it was called, out of balance. So,
12 having said that, that put the Agency on a track where it
13 was able to generate some income.

14 With that money and also help from the local farmers,
15 we developed what was calling the South Yuba Water System,
16 which brought water to Brophy, South Yuba, now this new
17 mutual water district and to Wheatland. Without the help of
18 the water transfers the Agency would have had no money for
19 this. More importantly, the Yuba River in my lifetime --
20 when I was a Boy Scout in the early '50s, I remember serving
21 Thanksgiving meals at the Marysville Auditorium; '55 we
22 helped buck houses out of Yuba City; and '86 helped buck out
23 houses in Olivehurst; in '96 I did that again.

24 So, in a short period of time the Yuba River
25 Marysville-Yuba City area has been substantially impacted by

1 floods. The only income that the area has to make matching
2 funds is the Agency. And as you can see, there is quite an
3 area of contention already developing that if you assign
4 more water -- let me back up a little bit.

5 The fisheries in an approximate amount the Yuba County
6 Water Agency gives about 350,000 acre-feet of water. Some
7 of it would be natural flow; a lot of it out of storage,
8 especially in the fall when the requirements are 6- to 700
9 cfs from, like, October to January. When we got in the '76
10 drought, we had to make provisions for that water. That
11 brought us down to the minimum pool which then didn't leave
12 water for the basic water rights.

13 Having said that, I would like to raise one other issue
14 and if our capacity of our Bullards Bar Dam is around
15 966,000, we have a minimum pool of 234, we had a usable pool
16 of 722, I have these here if you would like to -- in the
17 exhibits that will be entered later by the Yuba County Water
18 Agency. I am not sure what your ruling was on presenting
19 you with numbers. But if you look on the bottom, the
20 capacity when you take out of the minimum pool, that gives
21 usable of 732. When we also during the wintertime have a
22 170,000 acre-foot flood reservation which we can't invade,
23 we have to immediately put it back out. So in the
24 wintertime we only have a usable pool of 500-, I can't read
25 my writing, 562,000. If you hook at the area of the rest of

1 the projects, primarily on the Middle Fork and the South
2 Fork, you will notice there is about 280,000 acre-feet.
3 That is storage that is not subject to this hearing. And
4 most of this water year, in dry years especially, goes out
5 of the basin, so it is not even good for the fish during the
6 times you want.

7 If you would look at this other exhibit from the
8 Agency, you will notice in an average year --

9 H.O. BROWN: Excuse me, Mr. Frink, do you have a
10 comment?

11 MR. FRINK: I believe, Mr. Brown, we are getting beyond
12 the scope of policy statements and into discussion of
13 exhibits.

14 H.O. BROWN: I think, Mr. Mathews, you misspoke. These
15 are not exhibits?

16 MR. MATHEWS: They will be exhibits. All I am trying
17 to do as to policy is to whether the Board picking on the
18 Yuba County Water Agency is the sole issue or whether if
19 there is some pain to be shared for the fisheries, it should
20 come from all of the storage people on the Yuba River.

21 The other exhibit that I just passed out, you will
22 notice in an average 50 percent -- pardon me, in an average
23 -- I need to find --

24 H.O. BROWN: You're like the rest of us, Charlie, you
25 have to put on your glasses.

1 MR. MATHEWS: Thank you.

2 If you were to look in the lower right-hand corner, you
3 will notice between an above normal year and a below normal
4 year, approximately 25 percent of the water is not
5 controlled by the Agency and most of it does not even go
6 into -- well, it is part flow, so it goes to the Bear and to
7 the American River. So if the Fish and Game is right, that
8 we need more water to meet the Endangered Species Act, we
9 would submit to you that it shouldn't be borne by the Yuba
10 County Water Agency alone.

11 H.O. BROWN: Thank you.

12 MR. MATHEWS: Thank you very much for your time,
13 Mr. Chairman.

14 H.O. BROWN: Next policy speaker Mr. David Gothrow.

15 MR. GOTHROW: I would like to thank you, Mr. Chairman,
16 for the opportunity to speak this morning. My name is Dave
17 Gothrow. I am the manager of Linda County Water District.

18 I have been a resident of Yuba County for 33 years. I
19 live in the Arboga area which is seven miles south of
20 Marysville. Perhaps some of you saw the TV coverage of the
21 '97 flood. Arboga had quite a bit of coverage during that
22 tragic event. As a matter of fact, that is the same area
23 that three people died in during the '97 flood.

24 My family and I lost our home along with many of our
25 neighbors, so flooding is a real problem. I have some

1 additional flood experience. In 1986 I spent the evening of
2 February 20th helping to evacuate 24,000 people from the
3 area that I work in, the Linda and Olivehurst area.

4 The district at that time suffered enormous damage
5 because of that flood. We lost a good part of our
6 infrastructure, our two pumping stations, all the electric
7 components. It was quite a while before we got back on our
8 feet.

9 I would like to describe the district a little bit. We
10 provide water and sewer service to a population of about
11 9,000 people. We have about 2,800 service connections, all
12 of them are metered. The district's water supply is from
13 five water wells, groundwater. And the groundwater table in
14 the district is directly influenced by the agriculture
15 pumping that takes place in the area.

16 My concern is if the Yuba County Water Agency is
17 mandated to release more water, the increased demand to
18 lower the water temperatures could result in the farmers
19 pumping more groundwater. Of course, this will drop our
20 water table and result in increased pumping costs to the
21 customers of an already depressed county and district.

22 Let me provide you with some statistics. I think Mr.
23 Belza elaborated quite well on the economic condition of
24 Yuba County. The early '90s -- I had to do some background
25 work in order to qualify for a loan for what was then the

1 Farmers Home Administration. We were trying to make some
2 water improvements in the area. I got my statistics from
3 the 1990. Let me provide you with those.

4 The median income for Yuba County in 1990 was \$24,364.
5 The state average was \$40,559. The median income for the
6 unincorporated area of Linda was \$20,007. The unemployment
7 rate for the area historically averages 12 to 15 percent.
8 Facts substantiate that this is an economically depressed
9 county. Any additional cost for water service will only
10 exacerbate this problem.

11 I think at the time I did this we ranked -- Yuba County
12 ranked 56 out of 58 counties economically. I think Mr.
13 Belza said we have now moved up to 53, so I guess there is
14 some progress being made.

15 Linda County Water District is an integral part of the
16 East Linda Specific Plan which encompasses 1,760 acres east
17 of the Linda community. This plan projects a land use
18 designation containing 6,000 residential dwellings, 23 acres
19 for businesses and commercial uses and 175 acres for parks
20 and schools. The Specific Plan estimates ultimate
21 population of 16,000 for the planned area. This, of course,
22 is contingent upon available supply of ground and/or surface
23 water.

24 In December 1984 Linda County Water District got into a
25 service contract with Yuba County Water Agency resulting in

1 the allocation of Yuba River water through the Agency's
2 water rights on Yuba River. This contract allocates a
3 maximum of 5,000 acre-feet of water per year to the Linda
4 County Water District from the Yuba River. The guarantees
5 of this water supply is absolutely essential for ensuring
6 the planned growth in our district service area. Without an
7 adequate water supply the growth accompanied by increased
8 job market and tax base will be impossible.

9 It is my opinion that Yuba County Water Agency is
10 presently the best thing that has ever happened to Yuba
11 County. Mr. Mathews -- excuse me, Mr. Graham touched on it
12 pretty well, how they have helped all the agencies having
13 anything at all to do with water, whether it be irrigation
14 districts, municipal districts, reclamation districts, so
15 forth, they have all heard every one of us. My district
16 alone, since I have been there, we have received \$500,000
17 from the district in grants -- from Yuba County Water
18 Agency, I should say, in grants that helped me replace about
19 three miles of 45-year-old rusty steel, leaking pipelines
20 which really improved the water quality in the area. And
21 this is just but one example.

22 I think there is a realization by everybody here that
23 the decision that is going to be made regarding this thing
24 will have terrific impact on the economics of Yuba County
25 should the ruling go against Yuba County Water Agency.

1 Because everything in Yuba County is related to the water,
2 the M&I, the irrigation districts and levee districts, they
3 are lifeblood of the county and all decisions regarding this
4 usage, as I stated, will impact every single resident of the
5 county.

6 And I would like to thank you for your time and the
7 opportunity to speak.

8 H.O. BROWN: Thank you, Mr. Gothrow.

9 Mr. John Gilbert.

10 MR. GILBERT: Good morning, Mr. Brown. I am John J.
11 Gilbert representing the Dry Creek Mutual Water Company. I
12 am a walnut grower with orchards lying along the Bear River,
13 just to the west of Wheatland.

14 Dry Creek Mutual Water Company is a company that is
15 still in formation. We just completed the last portion of
16 our project and will begin water deliveries on the balance
17 of that project with this growing season.

18 We have a project that in total cost is a little over
19 two and three-quarter million dollars. Half of that cost
20 was granted -- not half of that, but half of the cost of our
21 main distribution system was granted by the Yuba County
22 Water Agency, and the other half is being financed by the
23 Agency with the Dry Creek Mutual Water Company paying for
24 that through our water purchases.

25 Even this will result in water costs as much as 75

1 percent greater than growers in that area are currently
2 spending; we are willing to bear that additional cost burden
3 in order to ensure us of a high quality, reliable water
4 source. Not only is the water going to cost more just for
5 the purchase, but growers such as myself will be required to
6 put in additional facilities in order to utilize that water.
7 In my case I will be spending in excess of \$150,000 in order
8 to add pumps to tie into the distribution system and connect
9 it to my solid-set sprinkling system.

10 The Dry Creek Mutual Water Company was one of the last
11 contractors to contract for water with the Yuba County Water
12 Agency. So we would be one of the first who would be cut in
13 the case of a reduction in the water supply. If that should
14 happen, with the additional investments that growers have
15 made plus we will continue to have to pay for the cost of
16 the project whether water deliveries are made or not, for
17 some growers in the area it would be an economic disaster.
18 Yuba County Water Agency has submitted a plan which I think
19 will serve the needs of the fishery as well as provide water
20 for the contractors buying water from the Agency. And I
21 would urge the State Water Resources Control Board to accept
22 the plan that the Yuba County Water Agency has submitted.

23 Thank you for the opportunity to speak.

24 H.O. BROWN: Thank you, Mr. Gilbert.

25 That concludes the policy statements unless there is

1 someone that we have missed.

2 Anybody else wishing to make a policy statement?

3 MR. AIKENS: Chairman Brown, I got word this morning
4 that Jim Waller from District 10 Levee Commission is in the
5 hospital and was unable to make it. Although I don't
6 represent them at all, I was asked to pass on this message
7 and see if he could attend and address this Board at a later
8 date.

9 H.O. BROWN: Jim Waller?

10 MR. AIKENS: Jim Wallers.

11 H.O. BROWN: Who is he with?

12 MR. AIKENS: Reclamation District 10.

13 THE COURT REPORTER: Can I have your name, please?

14 MR. AIKENS: My name is Curt Aikens.

15 H.O. BROWN: Mr. Aikens, you or Mr. Wallers can advise
16 me when he is able to show, and at that time we will accept
17 a policy statement from Mr. Wallers.

18 MR. AIKENS: Thank you.

19 H.O. BROWN: Mr. Mathews.

20 MR. MATHEWS: Can we also do the same? Bob Edmonston
21 from the Bear's Water District was one of your policy people
22 on the list. He is out of the country, but we will be back
23 to your second part of the hearings in the first week of
24 March.

25 H.O. BROWN: Do the same for Mr. Edmondson, thank you.

1 MR. MATHEWS: Thank you.

2 H.O. BROWN: Mr. Mathews and Mr. Aikens, you might
3 advise those gentlemen, if you see them or hear from them,
4 to let me know that they are available for a policy
5 statement and we will accept the policy statement at that
6 time.

7 MR. MATHEWS: Thank you, Mr. Chairman.

8 H.O. BROWN: We will now move to the evidentiary
9 portion of this hearing. After introductions of staff
10 exhibits we will receive testimony from the participating
11 parties in this following order:

12 National Marine Fisheries Service, U.S. Department of
13 Interior, Fish and Wildlife, California Sportfishing
14 Protection Alliance, South Yuba River Citizens League, Mr.
15 Walter Cook, Yuba County Water Agency, South Yuba Water
16 Agency, Cordua Irrigation District, Brophy Water District,
17 Browns Valley Irrigation District, Western Water Company and
18 Western Aggregates, California Department of Fish and Game,
19 California Department of Water Resources.

20 All parties who present evidence in this hearing may
21 make an opening statement explaining the objectives of your
22 case, the major points to be made and the relationship
23 between the major points and the key issues in the hearing
24 notice. Opening statements will be limited to 20 minutes or
25 less. Each party's case in chief will include their written

1 testimony, exhibits and oral summaries of written
2 testimony. As stated in the hearing notice, each witness
3 may give a brief summary of their written testimony, not to
4 exceed a maximum of 20 minutes. Each party shall limit the
5 direct testimony of their case in chief to a total of two
6 hours or less for all witnesses the party presents. I may
7 extend the time allowed for the presentation of a party's
8 case in chief upon a showing of good cause, but I urge the
9 parties and their witnesses to make their presentations as
10 concise as possible.

11 All parties are advised the written testimony admitted
12 into the record is accorded the same status as oral
13 testimony. Each party's witness will be subject to
14 cross-examination by other parties presenting evidence, the
15 State Water Resources Control Board staff and Board Members
16 immediately following the presentation of the party's case
17 in chief.

18 I ask that cross-examination be limited to 20 minutes
19 per witness or 20 minutes per panel of witnesses. I will
20 extend the time allowed for cross-examination upon a showing
21 of good cause. Following conclusions of all parties' cases
22 in chief and related cross-examination parties will have the
23 opportunity to present rebuttal evidence. Rebuttal evidence
24 will be subject to cross-examination. Oral opposing closing
25 arguments will not be made. An opportunity will be provided

1 for submission of written closing statement and/or legal
2 briefs following the close of the hearing.

3 I will now administer the oath to all those presenting
4 evidence. Will you stand, those presenting evidence.

5 (Oath administered by Hearing Officer Brown.)

6 H.O. BROWN: You may be seated.

7 Before we hear evidentiary testimony from the parties,
8 I will ask Mr. Frink to introduce the staff exhibits.

9 Mr. Frink.

10 MR. FRINK: Mr. Brown, before we get into introduction
11 of the staff exhibits, there were a couple preliminary
12 issues that should be addressed. They also need to set up
13 the overhead projector and get organized. I wonder if we
14 can take a brief recess right now and come back and address
15 the preliminary issues and then have the staff exhibits.

16 H.O. BROWN: We will have a 12-minute recess.

17 (Break taken.)

18 H.O. BROWN: I will call the hearing back to order.

19 I forgot to mention to you before we adjourned that I
20 am going to go ahead and allow you to bring a drink back in
21 if you put a lid on it. Make sure it is covered. If there
22 is a charming red-headed lady that walks through the door,
23 you immediately shove it under your seat and hide it.

24 I was talking to Mr. Gallery at break, share an
25 interesting moment. Many of you know Tim McCollough up in

1 Tuolumne Utility District. We were talking about the 1955
2 flood, and I was in Visalia at the time; I remember that
3 flood and remembered what happened up in the northern part
4 of the state as well as the central. I made a remark to my
5 friend Tim that I remember carrying my mother out in
6 waist-deep water. And Tim says, "Yes, I remember that
7 flood. My mother carried me out."

8 Mr. Frink, you're up.

9 MR. FRINK: Yes, Mr. Brown. Before we move into the
10 introduction of the staff exhibits, there are a couple of
11 preliminary issues that we should address or comment on.
12 The first one concerns a brief that was submitted by Mr.
13 Minasian on behalf of South Yuba Water District and Cordua
14 Water District. Due to the change in membership of the
15 Board since the 1992 hearing Mr. Minasian last requested
16 that the Board schedule a new hearing on all the issues or
17 that the Board Members each confirm on the record that they
18 have reviewed the transcript and exhibits from the 1992
19 hearing.

20 I reviewed the issues that were raised in Mr.
21 Minasian's brief as well as the reply brief that the Board
22 received from Mr. Sanders on behalf of the South Yuba
23 Citizens League. In response to Mr. Minasian's request I'd
24 note that, first, Water Code Section 183 provides that State
25 Water Board hearings may be conducted before any member of

1 the Board, but that final action must be taken by a majority
2 of all Board Members at a Board meeting. The law does not
3 require all Board Members to be present throughout an
4 evidentiary hearing.

5 Second, when a hearing is started before a hearing
6 officer who is no longer available, as is the case in this
7 proceeding, the court's ruling it isn't necessary, it is not
8 necessary to disregard the existing hearing record and start
9 over. A new hearing officer may preside for the balance of
10 the hearing. In State Water Board hearings it is not at all
11 unusual for different Board Members to fill in when the
12 initial hearing officer is unavailable.

13 Third, the transcripts and exhibits in water right
14 hearings are available for review by all Board Members.

15 H.O. BROWN: Is Mr. Minasian here?

16 Let's wait. Do we have a volunteer to go get Mr.
17 Minasian?

18 MR. FRINK: Thank you.

19 (Break taken.)

20 H.O. BROWN: Back on the record.

21 MR. FRINK: I described the scope of your brief and the
22 reply we had from Mr. Sanders, said there were a couple of
23 points I wanted to bring out under Water Code Section 183, a
24 single Board Member may preside over a hearing, all Board
25 Members are not required to be there, but a majority of the

1 Board must act on any proposed decision.

2 Secondly, when a hearing is started before a hearing
3 officer who is no longer available, the courts have ruled
4 you do not have to disregard the existing record and start
5 all over. A new hearing officer may preside for the balance
6 of the hearing and, in fact, in Water Board hearings it is
7 not unusual for one Board Member to fill in when the initial
8 hearing officer is unavailable.

9 The third point, and this is new, the transcript and
10 exhibits in a water rights hearing are available for review
11 by all Board Members prior to deliberation or action on the
12 proposed decision. In this instance we have made
13 arrangements for the hearing record to be kept in the
14 Board's executive offices for use by Board Members, and the
15 Board members will be informed accordingly.

16 Fourth, after the close of the hearing, the hearing
17 team staff will conduct a detailed review of the hearing
18 record, including the transcripts and exhibits from the 1992
19 hearing. The Hearing Officer, other Board Members and staff
20 will meet in closed session to discuss and consider the
21 hearing record.

22 Prior to the adoption of a Board decision, the Board's
23 deliberation on a proposed decision will be with the benefit
24 of the hearing team review of technical issues addressed in
25 the evidentiary record, including the record from the 1992

1 hearing. There is no legal requirement for individual Board
2 Members to confirm they have reviewed all portions of the
3 hearing record.

4 Fifth, Section 648.5 of Title XXIII of California Code
5 of Regulations provides a board's adjudicative proceedings
6 shall be conducted with the view toward securing information
7 expeditiously without unnecessary delay and expense. The
8 parties in this matter went to considerable expense to
9 participate in the 14 days of hearing in 1992. Requiring a
10 repetition of that process would not be in the public
11 interest. The seven additional hearing days that we have
12 scheduled should provide ample opportunity for presentation
13 of evidence that wasn't available in 1992.

14 In conclusion, the Board's hearing procedures do fully
15 comply with all due process considerations. I believe Mr.
16 Minasian's request should be denied and the hearing should
17 proceed in accordance with the provisions specified in the
18 December 21st, 1999, hearing notice.

19 H.O. BROWN: Thank you, Mr. Frink.

20 Is that all right, Mr. Minasian, do you have any
21 response?

22 MR. MINASIAN: Our objection, there is no point in
23 arguing unless the Board Members would like argument. We
24 appreciate the courtesy of Dan repeating again when we
25 arrived back in the hearing room.

1 Thank you.

2 H.O. BROWN: Thank you for your letter of concern. It
3 does continue to present to the Board Members the
4 responsibilities that we all share. We take those
5 seriously, as I know you do, Mr. Minasian. Your letter's
6 appreciated, and we thank you for it.

7 MR. BAIOCCHI: Just as a small point, I want to make
8 two points. First point is I didn't get any service from
9 Mr. Minasian on his motion. I am on the service list. I
10 didn't receive it. However, I did get a copy that was
11 forwarded to me by fax by Mr. Walter Cook, but it was well
12 after the fact. In fact, he faxed to me Mr. Minasian's
13 motion and also Mr. Sanders' rebuttal to that motion.

14 I would like to make one point, at least for the
15 record. If anyone, if any party has a due process problem
16 with the hearing process in this matter, such as United
17 Groups, we had to wait darn near eight years for a hearing
18 on it, on the Draft Decision, et cetera. I just want to
19 have that placed on the record.

20 Thank you very much.

21 H.O. BROWN: You are quite welcome, sir.

22 Continue, Mr. Frink.

23 MR. FRINK: There was a second issue that was raised
24 early this morning by Mr. Schulz in his policy statement,
25 and several other speakers also commented about the possible

1 problem of the expanded scope of the hearing as a result of
2 the Yuba County Water Agency petition to expand Yuba County
3 Water Agency's place of use to include the service areas of
4 the Central Valley Project and the State Water Project.

5 In response to the issue raised by Mr. Schulz, I note,
6 first, the Agency's change petition will be subject to an
7 entirely separate proceeding. Public notice of the petition
8 has not yet been issued. The period for filing of protests
9 against the petition has not yet begun, and no one
10 environmental document on the petition has been prepared, as
11 far as I know.

12 Since action on the change petition is not listed as an
13 issue in the hearing notice, the Board cannot act upon it.
14 And any evidence on the specifics of the change petition
15 would be beyond the scope of the current proceeding. I
16 would note that the hearing record already includes evidence
17 of past water transfers by Yuba County Water Agency.

18 H.O. BROWN: Can all of you hear Mr. Frink in the
19 back?

20 MR. FRINK: I note that the hearing record already
21 includes evidence of past water transfers by Yuba County
22 Water Agency. So in a generic sense availability of water
23 for transfer to other areas is within the scope of the
24 hearing, but action on the change petition or legal rulings
25 on issues raised by the change petition are not within the

1 scope of the current proceeding.

2 MR. LILLY: Mr. Brown, are you going to ever let me
3 address this issue before the Board rules on it? This is
4 totally unfair for there to be a ruling before we have a
5 chance --

6 H.O. BROWN: Mr. Lilly, I do the ruling not Mr. Frink.

7 MR. LILLY: I want to make sure that is clear.

8 H.O. BROWN: Yes, it is clear. Mr. Frink speaks and
9 you have a chance by all means.

10 Mr. Frink.

11 MR. FRINK: That is all I had to say, Mr. Brown.

12 H.O. BROWN: Mr. Schulz, did you have a response back
13 to that, since you raised the issue?

14 MR. SCHULZ: I believe that response to my request, the
15 issue that we were primarily concerned with in this
16 proceeding that there not be any legal rulings as to the
17 fundamental question of control beyond the mouth of the
18 Yuba and whether or not that once the water leaves the Yuba
19 River what the rights are with respect to the future
20 transfer, and that will be the fundamental issue under the
21 transfer proceeding.

22 As long as we know that there is going to be a transfer
23 proceeding, then we need not participate in this
24 proceeding.

25 H.O. BROWN: Okay.

1 Now, Mr. Lilly, you may speak.

2 MR. LILLY: Thank you, Mr. Brown.

3 As we stated earlier, I am Alan Lilly, appearing for
4 the Yuba County Water Agency. I appreciate the opportunity
5 to be heard on this legal issue, a very important one.

6 By way of clarification, we, obviously, are not asking
7 for a final order on the petition during this hearing.
8 Obviously, it cannot occur until the petition has been
9 noticed and protests have been received and resolved through
10 resolution a hearing process and the Board has issued a
11 order on those.

12 What we are asking the Board in this proceeding to do
13 is to recognize and confirm the Agency's right to retain
14 control over any water that must be released down the Yuba
15 River and flow past Marysville as a result of new instream
16 flow requirements. The reason for this is -- there are
17 several reasons for this.

18 First of all, the reason that DWR and State Water
19 Contractors want this not to be part of this hearing is in
20 the next hearing they will come back and they will say,
21 "Don't grant the petition because our water rights will be
22 injured because we are receiving that water now and any
23 attempt by Yuba to use that water, to dispose of that water
24 downstream of Marysville will injure our water rights." In
25 essence, they will get the water for free.

1 We believe that the Agency's right to dispose of
2 additional instream flow water downstream of Marysville is
3 critical to this hearing because it goes to the
4 reasonableness of any particular instream flow requirements.
5 Just by way of a simple example, if the Agency can derive
6 some revenue from additional instream flow requirement water
7 that flows past Marysville, the Agency then can use that
8 revenue to develop a conjunctive use program which several
9 of the parties have already indicated that the Agency should
10 do in this proceeding. Whereas, if the Agency has no right
11 to control that water downstream of Marysville, those
12 revenues would not be available.

13 Now, obviously, this is a very important legal issue.
14 We are not asking for a ruling this morning. What we
15 recommend the State Board do is let the parties address this
16 issue in their closing briefs, and certainly through
17 cross-examination as necessary during the hearing, and we
18 have no objection to the State Water Contractors filing a
19 closing brief on this issue as well, and then have the State
20 Water Resources Control Board decide whether -- an issue of
21 this legal importance should simply not be decided on short
22 oral arguments on the morning of the first day of the
23 hearing. It is too important.

24 And the problem is that if the Board says, "Well, that
25 is a separate issue and that will be a totally separate

1 proceeding," in essence then, the next time around DWR and
2 State Water Contractors, and probably the Bureau of
3 Reclamation, will argue that you have lost that issue. It
4 is not an issue anymore because you have lost control of
5 that water.

6 So, to the extent that the petition has raised the
7 issue of dominion and control of the water, it does need to
8 be addressed in this hearing. Why we don't ask for a ruling
9 on that now, we do ask for an opportunity to brief that now
10 and for the State Board to address that in its final
11 decision.

12 H.O. BROWN: Thank you, Mr. Lilly.

13 MR. LILLY: Thank you.

14 H.O. BROWN: Mr. Minasian.

15 MR. MINASIAN: On behalf of Cordua and South Yuba may I
16 make a slightly different emphasis while joining Yuba County
17 Water Agency's comments?

18 As you know, Cordua and South Yuba receive water
19 service from the Agency. We are part of the place of use.
20 We understand one of the purposes of this hearing is to
21 consider a public trust analysis of revising the terms of
22 the 1965 Fish and Game contract. In order to balance
23 public trust, one has to know to what purpose the water will
24 be put that is taken away from the agricultural consumers.
25 How could we evidentiarily not try to at least determine the

1 relative benefits and detriments of the ultimate disposition
2 of this water in this proceeding and complete our duties
3 under the public trust doctrine?

4 Thank you.

5 H.O. BROWN: Mr. Minasian, question for you. We do, of
6 course, not want to make this a change of petition hearing.

7 MR. MINASIAN: I agree totally with Mr. Lilly's
8 treatment of that issue.

9 H.O. BROWN: Mr. Frink's suggestion that we treat the
10 issue generically, would that be something you would
11 recommend?

12 MR. MINASIAN: I don't know how we can treat it
13 generically without knowing whether or not the Yuba County
14 Water Agency will be able to obtain benefits, which then in
15 turn could mitigate impacts within Yuba County. From a
16 evidentiary point of view, how would you ever make a finding
17 that under the public trust this is the best use of this
18 water and, therefore, we must rip it out of the hands of the
19 Agency without knowing where it is going to go? So,
20 factually, we have to have an evidentiary background to
21 substantiate a finding if the water is to be taken away from
22 all of us of what superior public trust use it will be put
23 to. Of course, if the water were going in the Salton Sea,
24 you would certainly want to know that fact to determine
25 public trustwise whether you should revise the requirements

1 on the Agency.

2 H.O. BROWN: It sounds like we are all in agreement,
3 that we do not want to make this a hearing on the change of
4 petition.

5 Mr. Frink, any comment?

6 MR. SCHULZ: Mr. Chairman.

7 MR. CHAIRMAN: Mr. Schulz.

8 MR. SCHULZ: Actually, it is two points. One, the
9 department and the State Water Contractors -- I can't speak
10 for the department. All I know -- Mr. Sandino, there you
11 are.

12 We are not trying to catch 22 the Yuba County Water
13 Agency and say, "Oh, you didn't consider, so now you already
14 lost the water." The Board can easily take care of that
15 problem by simply reserving the issues specifically, and we
16 would have no objection to that approach.

17 The other thing is that if you are going to consider
18 the dominion and control issue in this proceeding, I guess I
19 would go a lot farther than was suggested by Mr. Lilly. It
20 is an issue of enormous statewide consequences in terms of
21 the pass-through requirements and the storage release
22 requirements of every reservoir throughout the state.

23 If that is going to be a subject of closing briefs in
24 this proceeding, I think you ought to notice that, and you
25 might get much, much broader participation in this

1 proceeding than you have now if you go to that. So I would
2 prefer not to do what Mr. Lilly suggested. This is
3 something that needs to be very carefully noticed and have
4 all the right parties dealing with what is a very, very
5 fundamental issue.

6 As an example, right now Yuba has release of bypass
7 requirements. They are not asking apparently for that right
8 with respect to those, but they are with the respect to the
9 new ones. There is some real, complicated, tough policy and
10 legal issues involved in this. I don't think you have the
11 parties here for that important issue.

12 Thank you.

13 H.O. BROWN: Thank you, Mr. Schulz.

14 Mr. Lilly, would you like to respond?

15 MR. LILLY: Thank you for the opportunity to respond,
16 Mr. Brown.

17 This certainly is a very important legal issue as is
18 almost every issue that this Board hears in water rights
19 hearings. And to the extent that other parties want to
20 submit briefs, that is fine, and, of course, that can be
21 done even if they are not participating in the hearing
22 process when the Board gets to the adoption process. And
23 the Board has done that in other recent water rights
24 hearings, if necessary.

25 Just because the issue is of enormous statewide

1 significance, does not mean it should be dodged in this
2 hearing, if it is in this hearing. The basic problem is, if
3 the Board does not resolve the issue of the Yuba County
4 Water Agency dominion and control of additional water
5 mentioned in flow requirement at this time, then the Board
6 does not have a complete decision to determine whether or
7 not the instream flow requirements adopted by the Board are
8 reasonable or not. The dominion and control does affect the
9 reasonableness of the Board's decision.

10 H.O. BROWN: Thank you, Mr. Lilly.

11 MR. CUNNINGHAM: Mr. Brown.

12 H.O. BROWN: Mr. Cunningham.

13 MR. CUNNINGHAM: If I might, your Honor, on behalf of
14 Department of Fish and Game and also on behalf of the
15 State's interest as one of the parties arguing for the
16 public trust, I think it is important that you hear at least
17 one other comment from lawyers, as well.

18 An interesting argument and interesting issue. Your
19 Honor, I just finished reading the nine elements in the
20 notice, the nine issues to be addressed in the proceedings
21 for the next two weeks. I can't find this issue anywhere
22 within those nine elements.

23 On behalf of all of the rest of the people of the State
24 of California, I would be concerned about the due process
25 issues of going forward in addressing, discussing, this

1 issue without the opportunity of others who are unaware of
2 this proceeding to participate in some future time.

3 Mr. Lilly's glib suggestion that somehow everybody else
4 will find out about this and miraculously file closing
5 briefs, I think, begs the question. It has not been
6 noticed. It is not an issue before this proceeding. It has
7 not been provided to the rest of the people who would wish
8 to brief this issue. Any argument that those people could
9 somehow find out about this, I think, is specious.

10 I do think this is an important issue. I do think it
11 needs to be addressed at some point in time. I think the
12 reservation of this issue to the Board for future discussion
13 is probably the appropriate course. Mr. Schulz, I think,
14 has the right of it. I do not think we should simply spend
15 a lot of time dwelling on this issue in this proceeding
16 especially since, as Mr. Minasian would have it, it opens up
17 a much bigger question.

18 We are talking about what happens to waters that are
19 passed through these kinds of projects. In this case,
20 specifically what happens to those waters when they hit the
21 Delta. I suggest that the entire Delta, Bay-Delta
22 proceedings should be expanded in scope to invest what
23 happens when those waters that are going to be used to solve
24 Delta problems are released through a variety of upstream
25 projects. This Board has very carefully parsed these

1 proceedings as separate proceedings. The Bay-Delta is not
2 associated with this proceeding or any to other proceeding
3 on the Feather, Sacramento, the American or any other of the
4 drainages that feed into the Bay-Delta. Now we are asked to
5 look at those questions and combine those questions, and I
6 think that is not the intent of this Board, never been the
7 intent of this Board. I think this is a separate event
8 which should be treated as a separate event.

9 H.O. BROWN: Thank you, Mr. Cunningham.

10 Mr. Frink, take a moment up here, you and I.

11 Stay seated. We will go off the record for just a
12 moment.

13 (Discussion held off record.)

14 H.O. BROWN: We are back on the record.

15 Before I rule on this, I'll have a recommendation by
16 Mr. Frink and see if it is what I wanted to hear.

17 MR. FRINK: Yes, Mr. Brown.

18 Since the outset of this proceeding the focus has been
19 on uses of water for protection of fish in the Lower Yuba
20 River and the affect that that might have on Yuba County
21 Water Agency's other uses of water. At this point the
22 rights of Yuba County Water Agency are as they are designed
23 in their permits. The changes in rights that they may wish
24 to obtain under their change petition are not before the
25 Board in this hearing.

1 As I mentioned before, the possibility that water from
2 Yuba County Water Agency has been and may be available for
3 transfer outside of the Agency's current service area has
4 been addressed previously in the hearing record, but it has
5 not -- but the focus of this proceeding has not been on any
6 particular transfer proposal, nor should the focus of this
7 hearing change to the proposal raised in Yuba County Water
8 Agency's petition. There may be some overlapping issues
9 between water transfers that may be proposed in the future
10 and the plans that the Agency has under its change request
11 or petition. But the focus of this particular hearing, I
12 don't think, should be on making any rulings over the
13 overall dominion and control that Yuba County Water Agency
14 may have on water outside of its place of use as proposed in
15 the petition, its change petition.

16 H.O. BROWN: Thank you, Mr. Frink.

17 Such is my ruling.

18 Proceed with your direct.

19 MR. FRINK: Yes, Mr. Brown.

20 Parties, as was indicated in the hearing notice, the
21 staff exhibits for this hearing include the updated version
22 of Staff Exhibits 1 through 7 which were introduced as
23 exhibits by reference to the 1992 hearing.

24 In addition, the Division of Water Rights contracted
25 with the modeling support group of the Department of Water

1 Resources to do some modeling work regarding water supply
2 effects of implementing alternative instream flow
3 requirements on the Lower Yuba River. If you recall, at the
4 time of the 1992 hearing Yuba County Water Agency introduced
5 some evidence based on hydrologic modeling work of their
6 consultants, but the model itself was not introduced into
7 the record.

8 During June of last year State Water Board staff met
9 with Yuba County Water Agency representatives and other
10 interested parties to discuss the possibility of the
11 Department of Water Resources staff doing some modeling work
12 using the same model that was used by Yuba's consultants.
13 Yuba County Water Agency agreed to provide certain input
14 files to the Department of Water Resources and the Agency's
15 consultants also answered questions from DWR staff about
16 operation of the model.

17 Receiving the model into the record in this proceeding
18 will provide the State Water Board a tool for analyzing
19 alternative flow scenarios in the Yuba River. In addition,
20 Dr. Sushil Arora from the Department of Water Resources
21 Modeling Support Unit has agreed to appear as a witness to
22 explain the results of the hydrologic modeling that he and
23 his staff did under contract with the Division of Water
24 Rights.

25 At this time I would like to call Dr. Arora as a

1 witness to explain the Department's modeling work.

2 ---oOo---

3 DIRECT EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD

4 DIVISION OF WATER RIGHTS

5 BY MR. FRINK

6 MR. FRINK: Good morning, Dr. Arora.

7 DR. ARORA: Good morning.

8 MR. FRINK: I do have a couple of preliminary
9 questions, after which I would like you to summarize the
10 modeling work that you and your staff did.

11 I should note for the record, Mr. Brown, although Dr.
12 Arora accepted our invitation to appear as a witness, he is
13 an employee of Department of Water Resources and he is
14 accompanied this morning by David Sandino, an attorney with
15 the Department of Water Resources.

16 Please state your name for the record.

17 DR. ARORA: Sushil Arora.

18 MR. FRINK: Dr. Arora, were you sworn in as a witness
19 when Mr. Brown administered the oath earlier this morning?

20 DR. ARORA: Yes.

21 MR. FRINK: The document that is titled Summary of
22 Qualifications of Sushil K. Arora has been marked as Exhibit
23 S-SWRCB-2, is that document an accurate statement of your
24 qualifications?

25 DR. ARORA: Yes.

1 MR. FRINK: What is your current position of employment
2 and could you give us a brief summary of your
3 responsibilities in that position?

4 DR. ARORA: Yes. I am a supervising engineer. I am
5 chief of the Hydrology Operation Section within the Modeling
6 Support Branch of the Office of Statewide Planning office
7 within DWR. Our section is responsible for three different
8 types of activity. One is the development of models for
9 system analysis and, number two, development of hydrology
10 and system data to go with the models and, number three,
11 applying the model and using the data for doing what-if type
12 of studies under different scenarios.

13 MR. FRINK: Have you previously appeared as a witness
14 before this Board?

15 DR. ARORA: Yes, I have.

16 MR. FRINK: When was your most recent appearance?

17 DR. ARORA: I believe was last spring, spring '99.

18 MR. FRINK: Was that in the Bay-Delta proceedings?

19 DR. ARORA: Yes.

20 MR. FRINK: The document that is marked as Exhibit
21 S-SWRCB-1 is labeled as the Written Testimony of Sushil. Is
22 that exhibit a true and accurate copy of your testimony?

23 DR. ARORA: Yes.

24 MR. FRINK: You mentioned you have a set of
25 transparencies which we have marked for identification as

1 Exhibit S-SWRCB-8.

2 What is the content of those transparencies?

3 DR. ARORA: Those transparencies are really a summary
4 of my written testimony, which is Exhibit 1, and some
5 information from Tables 1 and 2 of the Exhibit 3 for this
6 hearing. The transparencies are prepared really to
7 facilitate understanding of my oral testimony for the Board
8 and other parties.

9 MR. FRINK: I would note there are copies of the
10 transparencies that Dr. Arora will be referring to available
11 at the table here. I handed them out previously to some of
12 the representatives of the parties, but there may be others
13 who would like to follow along. The information in the
14 transparencies is from the testimony and exhibits that Dr.
15 Arora will be talking about.

16 Dr. Arora, would you please give us a brief oral
17 summary of your testimony.

18 DR. ARORA: Yes. I am going to read this exhibit.
19 This transparency, which is my oral presentation.

20 Board staff requested DWR staff to conduct a set of
21 five operation studies through letter dated May 25, 1999 and
22 July 2, 1999, which are Exhibits S-SWRCB-4 and S-SWRCB-5.
23 The purpose of the study was to assess water supply impacts
24 of proposed flow requirement in the SWRCB 1996 Draft
25 Decision in the Lower Yuba River during the hydrologic

1 period of water years 1922 through 1992 and, of course,
2 historic drought of water years '28 through 1934.

3 This transparency summarizes the different studies
4 requested by the Board staff.

5 Study No. 1: This study was conducted at the present
6 level demands, the current practice simulation for
7 implementing the PG&E contract and the current minimum flow
8 requirements in the YCWA/DFG agreement.

9 Study No. 5: This study was conducted at the present
10 level of demands, the current practice simulation for
11 implementing the PG&E contract and the proposed minimum flow
12 requirements in the SWRCB 1996 Draft Decision.

13 The only difference between 1 and 5 is the flow
14 requirements. Other things are common.

15 Study No. 2: This study was conducted at the full
16 development level of demands, the current practice
17 simulation for Implementing the PG&E contract and the
18 current minimum-flow requirements in the YCWA/DFG
19 agreement.

20 Study No. 6: This study was conducted at the full
21 development level demands, the current practice simulation
22 for implementing the PG&E contract and the proposed minimum
23 flow requirement in the SWRCB 1996 Draft Decision.

24 The difference between Study 2 and Study 6 are, again,
25 the flow requirement, but everything else is staying

1 between Study 2 and Study 6.

2 Study No. 9: This study was conducted at the full
3 development level of demands, no provisions for implementing
4 the PG&E contract, that is incidental power generation only,
5 and the proposed minimum flow requirement in the SWRCB 1996
6 Draft Decision.

7 This transparency summarizes the modeling assumptions
8 which are very important elements for studies. Let me read
9 this one.

10 Reservoir operations criteria are hydrologic data;
11 demands both at present level and full level of development;
12 deficiency criteria, minimum for requirements, upper basin
13 operations, et cetera, were developed by YCWA consultant and
14 adopted as such for the modeling studies.

15 It is noted that no independent evaluation of these
16 assumptions was made by DWR.

17 A technical memorandum dated May '99, Yuba River Basin
18 Model Operations and Simulation Procedures, prepared for the
19 Agency by the consultants was provided to DWR. This is
20 Exhibit S-SWRCB-7. This document summarizes the system
21 features and all modeling assumptions used in the studies.

22 For the studies the computer model that we will use for
23 assessment -- I am going to read again.

24 The analytical tool used to evaluate the water supply
25 impacts of proposed fish flows on the system was a computer

1 model, HEC-5, developed by the Hydrologic Engineering Center
2 of U.S. Army Corps of Engineers and modified by the Agency
3 consultants.

4 A copy of the model was acquired by the Board staff and
5 provided to the Department staff, Exhibit S-SWRCB-6. This
6 model simulates the operation of reservoirs system with
7 flood control and water conservation purposes. The model
8 can be used to evaluate and compare what-if scenarios to
9 evaluate water supply impacts of any proposed flow
10 requirements.

11 Since the model was used in a monthly time-step mode,
12 all the relevant data input into the model must be converted
13 to monthly values.

14 Now here we have the results. After we've done the
15 studies, then we compare them. And these are the
16 information relating to the water supply impacts only. That
17 information we have summarized here. And as you can see
18 here, this table is really from my Exhibit Number 1 --
19 Exhibit Number 3. I am going to read from the top there.

20 Impacts of the Board's proposed flow requirement on
21 YCWA deliveries in thousand acre-feet per year from Table 1,
22 SWRCB Exhibit 3. There are two parts of this table. The
23 first part really compares the impacts for the present level
24 demand and then we have two different time windows. One is
25 long-term average annual deliveries, and the other is

1 specially designed to look at under the dry sequence of '28
2 to '34 period.

3 Study 1, as you might recall, is existing flow
4 requirements study, and that is a present level demand. And
5 Study No. 5 which is proposed flow requirement under '96
6 Draft Decision.

7 Looking at the long-term averages, our study shows that
8 there is a reduction of 20,000 acre-feet on average. This
9 is a long-term average computed over the period of 1922 to
10 1992, 71 years. This average is for that window. That is
11 71 years.

12 From the same studies, if we look at the dry period
13 sequence, which is starting the spring of 1928, which is
14 really starting the month of May '28 through October of '34,
15 that is a footnote for that explaining that dry period, that
16 is six and a half years long dry period. Under that period
17 what we find is that there is a reduction of 50,000
18 acre-feet, which is comparing Study 1 and Study 5, which is
19 the difference of the two deliveries of water supplies.
20 These two scenarios is about 50,000 acre-feet per year
21 during this period.

22 Similarly, for the future level demand we have two
23 studies, Study No. 2 and 6 which we talked about a minute
24 ago, the description of those. And for the long-term
25 averages what we find is that the impact is 33,000 acre-feet

1 per year against 71 year average number. And for the dry
2 period, the impact goes up slightly from previous period and
3 is 68,000 acre-feet per year, again for a six-and-a-half
4 year averaging process.

5 This transparency is really to highlight the effect of
6 removing power generation from the system. So we have the
7 study done, Study No. 9, which was designed to reflect what
8 will happen if we took out the requirement of energy
9 generation and only to look at incidental power and
10 generation and compared study which was designed to generate
11 the power. That is requirement we impose on the model.
12 That is Study No. 6, which really reflects what we call
13 Current Power Generation Practices.

14 When you compare these two numbers here, we will see
15 that what is the impact of with or without incidental power
16 generation scenario. And as you can see here, the impacts
17 are insignificant. Long-term averages we have by putting
18 power into system, requirement into system, we have 2,000
19 acre-feet less water available to the contract users, YCWA
20 water supply users. And for the dry period the impact is
21 similar, which is 2,000 acre-feet less available.

22 The cost money effect on the energy generation is two
23 gigawatt hours per year less under this scenario. This is
24 to show when you compare to the 6 and 9 and with or without
25 hydropower generation what we expect in the system.

1 That would conclude my testimony.

2 MR. FRINK: Appreciate your summary, Dr. Arora. I do
3 have a couple of clarifying questions.

4 Is it correct that the estimated water shortages that
5 were identified in your studies are all based on the present
6 and future estimated water demands that you obtained from
7 Yuba County Water Agency's consultants?

8 DR. ARORA: That's correct.

9 MR. FRINK: Did the Department examine historical water
10 deliveries by Yuba County Water Agency?

11 DR. ARORA: No.

12 MR. FRINK: Did the Department of Water Resources make
13 any independent evaluation of the water demand estimates
14 that you received from Yuba County Water Agency's
15 consultants?

16 DR. ARORA: No, we did not.

17 MR. FRINK: Are there any corrections that you wanted
18 to make in any of the exhibits that were listed as S-SWRCB-1
19 through 7?

20 DR. ARORA: Yes. We found a couple typos after
21 returning our exhibits, and there are two corrections. One
22 is that in the Exhibit 3, the Figures 3, 4, and 6, the
23 Y-axis on the figures should have been end of month storage
24 in thousand acre-feet, rather than deliveries in thousand
25 acre-feet per year. So, that was a typo, so we need to fix

1 that. It should be end of month storage.

2 Number two correction we had is which I really in my
3 transparency I kind of cleared it up. In Table 1 and 2 in
4 my Exhibit 3, the dry period is defined, which is footnote
5 of two tables, the dry period -- in the dry period is
6 defined for period six-and-a-half years, starting May 28 not
7 April 28. So instead of April, it should have been May.
8 Again, is a typo which unfortunately came into our
9 exhibits.

10 MR. FRINK: Any other corrections?

11 DR. ARORA: No. Two corrections.

12 MR. FRINK: I believe Mr. Mona does have a question.

13 MR. MONA: Dr. Arora, regarding Tables A-18, -20, -22
14 and -26 of your report, Tables A-18, A-20, A-22, A-24 and
15 A-26 identify the appendix, provide output data showing
16 deliveries and deficiencies at Daguerre Point Diversion Dam
17 for Studies 1, 2, 5, 6 and 9; is that correct?

18 DR. ARORA: Yes.

19 MR. MONA: The tables are comprised of five columns,
20 one of which is labeled year type; is that correct?

21 DR. ARORA: Yes.

22 MR. MONA: In the column labeled year type, I noted
23 that there are five year types identified as C for critical,
24 D for dry, B for below normal, A for above normal and W for
25 wet.

1 Do you see this labeling?

2 DR. ARORA: Yes.

3 MR. MONA: Since the State Board's Draft Decision
4 essentially specifies instream and temperature requirements
5 for the Lower Yuba River in a three water year
6 classification, dry, normal, wet, can you first explain why
7 five year types were used and what is the water year
8 classification system used to identify the water year types
9 for the tables?

10 DR. ARORA: Yes. This really carried over from YCWA's
11 use of demand data. And that is they have -- we have
12 adopted from them. Really this classification is to pick
13 the demand level, nothing else, nothing more. For example
14 in their original data file, which we got from them, they
15 have these year types, which we adopted, and these are based
16 upon -- I looked at later, and these are based upon
17 different type index which Board has used for other
18 standards in the past. But for this purpose it was simply
19 to pick a demand level, so to say, for the system.

20 Now, if you see here, there are two different demand
21 patterns in that study. One is above normal and wet, is one
22 type of demand; the other year type is below normal, dry and
23 critical, are different demand levels. So, we picked this
24 year type, what they had adopted and we adopted as given by
25 the YCWA consultant in their use of the studies. We didn't

1 want to change it. And this really comes from them.

2 MR. MONA: One final question. The water year type
3 classification, is that the water classification system, is
4 that the Sacramento River Index or the Sacramento Valley
5 Index or some other index that was used to identify the five
6 water year types?

7 DR. ARORA: That is exactly what it is, Sacramento
8 River Index as defined under D-145 development of these
9 standards.

10 MR. MONA: Thank you.

11 MR. FRINK: I believe Ms. Low has a couple questions,
12 Dr. Arora.

13 MS. LOW: Dr. Arora, I just had a couple of clarifying
14 questions. When you ran the model, were the instream flow
15 levels met in each of the different scenarios that you ran?
16 Say, for example, under the Draft Decision scenarios were
17 those minimum flows met at all times?

18 DR. ARORA: If I recall, they are probably one year,
19 like '77-78, the very dry year in hydrology. Under certain
20 study scenarios requirements were not met. They were some
21 flow violations in the study. Three or four months, if I
22 remember correctly, in year '77-78, spring I guess.

23 MS. LOW: So that was --

24 DR. ARORA: That year we noticed that the system has
25 gone broke. That means going down to the minimum levels,

1 and then we just only able to shorten standards. We did not
2 meet standards in three or four months in that year.

3 MS. LOW: That was '76-77.

4 DR. ARORA: '77.

5 MS. LOW: And --

6 DR. ARORA: I think '77-78.

7 MS. LOW: That isn't included in --

8 DR. ARORA: This is shown on Tables A- -- there are
9 different tables there. But I know for sure, like I said,
10 Table A-29 was 35. And then similarly for Table A-31 for
11 Study 6, which was the future level demands. And there are
12 five tables there that reflect five scenarios we just talked
13 about.

14 MS. LOW: The deficit in the instream flows would be
15 shown on those tables?

16 DR. ARORA: Yes.

17 MS. LOW: Thank you.

18 Also, if we were to look at these reductions in
19 deliveries as percentages, you could do that; is that
20 correct? Like on your results on Page 3, we could look at
21 those as percent reductions in deliveries between various
22 scenarios --

23 DR. ARORA: Sure.

24 MS. LOW: -- that you compared, right?

25 DR. ARORA: Yeah.

1 MS. LOW: From what I can see here, you predicted the
2 difference at the full level of demands in the dry year
3 period over the average dry year period; you would get about
4 a 17 percent reduction in deliveries. Does that sound right?

5 DR. ARORA: That is the average.

6 MR. LILLY: Excuse me, I am going to object. The
7 question is unclear. We don't know which scenario the
8 question is directed to, whether it is for present demands
9 or full level demand.

10 H.O. BROWN: Wait a minute. Restate your question.

11 MS. LOW: Yes, I will. I meant to make this refer to
12 the full development level of demands over the dry period
13 average deliveries. So it would be comparison of Study No.
14 2 and Study No. 6, which would be extreme case in terms of
15 reduction in average annual deliveries.

16 And it is my understanding what the study results would
17 indicate is that in that -- comparing those two scenarios
18 you would get about a 16.9 percent reduction in average
19 deliveries; is that right?

20 DR. ARORA: That is true, in average. I keep
21 emphasizing average because some years it may be more than
22 that. Other years may be -- so average is six-and-a-half
23 year average. Some years could be higher and some years
24 could be lower.

25 MS. LOW: Right, right. But this would be the average

1 over the 1928 to 1934 period that you modeled?

2 DR. ARORA: That's right.

3 MS. LOW: Thank you very much, Dr. Arora. That is all
4 the questions I have.

5 MR. FRINK: Staff has no other questions of Dr. Arora.
6 He is available for cross-examination by other parties.

7 H.O. BROWN: All right, Mr. Frink.

8 First up on cross is National Marine Fisheries, Mr.
9 Edmondson.

10 ----oOo----

11 CROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD

12 DIVISION OF WATER RIGHTS

13 BY NATIONAL MARINE FISHERIES SERVICE

14 BY MR. EDMONDSON

15 MR. EDMONDSON: I only have two clarifying questions
16 for Dr. Arora. I apologize, I wasn't attended by staff or
17 by legal counsel, so I will be doing this myself.

18 Dr. Arora, you stated that under the request or model
19 studies that the model was run with a one-month time-step?

20 DR. ARORA: Right.

21 MR. EDMONDSON: However, Yuba County operates its
22 facilities on a real-time basis. If the model was rerun but
23 a shorter time-step, would that make a difference?

24 DR. ARORA: Definitely it would.

25 MR. EDMONDSON: The other question I had was regarding

1 the assumption of current minimum flow requirements.

2 Do you know how much water under those assumptions
3 being released in addition to the minimum flow requirement?
4 In other words, it is common for projects to release a
5 certain amount of water as a buffer. Are you aware of a
6 buffer or additional water was being modeled as released in
7 this model study?

8 DR. ARORA: We have buffer in the requirements.

9 MR. EDMONDSON: Can you give me an idea of how much or
10 what percentage over the minimum flow that is?

11 DR. ARORA: If I recall, I am not a hundred percent
12 positive, it's probably 2 percent when the requirement is
13 plus 5 cfs. It is detailed in the modeling report from the
14 consultants. But if I recall, in that ballpark.

15 MR. EDMONDSON: Dr. Arora, going back to the first
16 question, if the model is rerun on a shorter time-step,
17 would that reduce the impacts for YCWA's deliveries?

18 DR. ARORA: It is difficult to say at this minute.
19 However, when we used study in comparative mode, compare, we
20 have to run both study in the same fashion. So, in that
21 light the impacts would be not that much different. You are
22 running both models in the same mode. The absolute number
23 would change for one study, but when you look at the
24 comparative difference, I think the difference would be in
25 the same ballpark, especially in the dry period when

1 everything balanced conditions. We are trying to run as
2 close to needs, that is what you need to do. Other than
3 company water. So under those scenarios I believe that it
4 would actually be pretty close to what we have monthly now.

5 MR. EDMONDSON: Thank you, sir.

6 That is all I have.

7 H.O. BROWN: Department of Interior, Mr. Gee.

8 MR. GEE: Thank you. I have no questions for Dr.

9 Arora.

10 H.O. BROWN: California Sportfishing Alliance, Mr.

11 Baiocchi.

12 ----oOo----

13 CROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD

14 DIVISION OF WATER RIGHTS

15 BY CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

16 BY MR. BAIOCCHI

17 MR. BAIOCCHI: I have a few questions, Mr. Brown.

18 Doctor, this modeling was done in 1999, correct?

19 DR. ARORA: Yes.

20 MR. BAIOCCHI: In doing the modeling and the
21 assumptions were the water transfers that took place, I
22 believe commencing with the year 1987, was that included in
23 the analysis?

24 DR. ARORA: I believe not. It was not included.

25 MR. BAIOCCHI: Water transfers were not included?

1 CROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD
2 DIVISION OF WATER RIGHTS
3 BY SOUTH YUBA RIVER CITIZENS LEAGUE
4 BY MR. SANDERS

5 MR. SANDERS: I just have one or two questions, again
6 following up on that last question.

7 For the full development level of demands, do you know
8 if there was any consideration of water conservation or
9 consumptive -- water conservation in getting those levels?

10 DR. ARORA: I am not aware of that.

11 MR. SANDERS: You basically just took the information
12 that they gave you and modeled it.

13 DR. ARORA: Exactly right.

14 MR. SANDERS: Now, I noticed that for present level of
15 demand you have a relatively small number, 20,000 acre-foot
16 difference with the existing flow requirement and the draft
17 flow requirements. You didn't model what the difference is
18 for the actual historical, comparing the actual historical
19 use to the draft flow requirement; is that correct?

20 DR. ARORA: Yeah, we did not model historic
21 operations.

22 MR. SANDERS: If Yuba County Water Agency actually
23 never operated their system in accordance with the existing
24 flow requirements, then this prediction really doesn't tell
25 very much about what happens in the real world, does it?

1 DR. ARORA: Yes. We are comparing those scenarios. If
2 you violate those scenarios, do something different, they
3 are not comparable anymore?

4 MR. SANDERS: Actual real world differences might be
5 much smaller than even 20,000 acre-feet or 50,000 acre-feet?

6 DR. ARORA: I don't know the real world.

7 MR. SANDERS: Thank you very much.

8 H.O. BROWN: Thank you, Mr. Sanders.

9 Mr. Walter Cook.

10 Yuba County Water Agency, Mr. Lilly or Mr. Aikens.

11 MR. LILLY: Mr. Brown, I would just like to clarify the
12 order of cross-examination of the parties. As you know, the
13 Department of Fish and Game was allowed to present its case
14 in chief late because Mr. John Nelson is on vacation this
15 week, and we have no objection to that. But I think that
16 the logical order would be to have the resource agencies do
17 their cross-examinations first and then go to the water
18 agencies and water districts. I don't think that just
19 because Mr. Nelson is on vacation that should affect the
20 order, logical order, of cross-examination. We request to
21 put DFG in order at this point.

22 H.O. BROWN: Mr. Baiocchi.

23 MR. BAIOCCHI: Mr. Brown, I believe that the order that
24 you put together is reasonable. We are following it.
25 Secondly, Mr. Lilly needs to understand we filed a

1 complaint, United Group, and we happen to be in front of
2 him. We are the complainant in this process. I think it is
3 very reasonable how it is put together.

4 H.O. BROWN: Thank you, Mr. Baiocchi.

5 MR. BAIOCCHI: Everyone gets their opportunity to
6 cross-examine.

7 H.O. BROWN: Mr. Lilly.

8 MR. LILLY: That is exactly what we are saying. The
9 CSPA filed a complaint, Department Fish and Game filed a
10 complaint. It makes sense for them to go together in the
11 order of cross-examination.

12 H.O. BROWN: We'll keep the order as is. You are up,
13 Mr. Lilly.

14 ---oOo---

15 CROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD

16 DIVISION OF WATER RIGHTS

17 BY YUBA COUNTY WATER AGENCY

18 BY MR. LILLY

19 MR. LILLY: Good morning, Dr. Arora. As you know, my
20 name is Alan Lilly. I am an attorney for Yuba County Water
21 Agency. I do have some questions for you.

22 First of all, I am going to start with Exhibit
23 S-SWRCB-5. Do you have that in front of you?

24 Can you get it.

25 DR. ARORA: Yes, I do.

1 MR. LILLY: Do you have Pages 1 and 2 of that letter, I
2 am not talking about the cover page, the two pages of the
3 letter, do those list the five scenarios that the State
4 Water Resources Control Board staff asked you and your staff
5 to model?

6 DR. ARORA: Yes.

7 MR. LILLY: Now, when you were doing that modeling
8 work, I think you have testified -- we had a workshop at the
9 State Board staff with all interested parties.

10 Did you attend that?

11 DR. ARORA: My staff was there.

12 MR. LILLY: Your staff was there?

13 DR. ARORA: Yes.

14 MR. LILLY: Then there were follow-up discussions by
15 you and members of your staff with the Agency's consultants;
16 is that correct?

17 DR. ARORA: That's true.

18 MR. LILLY: During those discussions you actually
19 reviewed the hydrological model and hydrological assumptions
20 in that model in quite a bit of detail, did you not?

21 DR. ARORA: We try to understand them.

22 MR. LILLY: Didn't you actually review them in detail?

23 DR. ARORA: Yeah.

24 MR. LILLY: Now, going back to the assumptions, the
25 modeling scenarios that are listed in Exhibit 5, are you

1 aware in 1966 the Yuba County Water Agency executed a power
2 purchase contract with Pacific Gas & Electric Company?

3 DR. ARORA: That's true.

4 MR. LILLY: Just for shorthand I am going to refer to
5 Pacific Gas & Electric Company as PG&E. I assume you know
6 what I am talking about?

7 DR. ARORA: Yes.

8 MR. LILLY: What is your understanding regarding the
9 provisions of that 1966 contract?

10 DR. ARORA: In the studies as we set an assumption
11 sheet, we just modeled the current practice simulation. We
12 did not model the contract, per se.

13 MR. LILLY: What is your understanding of the
14 differences between the current practice and the actual
15 requirements of that contract?

16 DR. ARORA: I am not too much familiar with that
17 contract, honestly.

18 MR. LILLY: Are you aware that at any time PG&E could
19 require the Yuba County Water Agency to operate the Yuba
20 River Project to satisfy all the requirements of the 1966
21 contract?

22 DR. ARORA: I guess so. I am sure. I don't work with
23 real time.

24 MR. LILLY: Mr. Arora, I am going to hand you a copy of
25 a letter from me to Mr. Thomas Howard, the Assistant

1 Division Chief, dated July 19, 1999. I will state for the
2 record that while this already is in the staff files and,
3 therefore, is in the staff exhibits, I would like to have
4 this letter denominated as Exhibit S-YCWA-23 just for ease
5 of reference. I do have copies available for the Board
6 staff and for members of the public who are here.

7 If you can just look this over and tell me when you've
8 finished reviewing it, Mr. Arora. It is just a one-page
9 letter, although there are subsequent pages with a mailing
10 list on it.

11 DR. ARORA: Yes.

12 MR. LILLY: You had a chance to look at that?

13 DR. ARORA: Yes.

14 MR. LILLY: Have you ever seen this letter before?

15 DR. ARORA: I don't recall, but maybe I have.

16 MR. LILLY: Fair enough.

17 Did Mr. Howard or any other member of the State Water
18 Resources Control Board staff ever ask you to conduct any
19 model studies for scenarios where the Yuba County Water
20 Agency would operate its project according to all of the
21 requirements of the 1966 contract with PG&E?

22 DR. ARORA: No, he did not ask.

23 MR. LILLY: I would like you to look at your S-SWRC-1,
24 just second page of that.

25 Do you have that?

1 DR. ARORA: Yes.

2 MR. LILLY: I am just going to read the last sentence
3 on Page 2. I will read it out loud, and I then will ask you
4 a question.

5 Both these studies -- (Reading.)

6 And just for context we are referring to Study 6 and
7 Study 9.

8 -- were conducted at full level of
9 development and incorporate the proposed flow
10 requirements. Impacts of eliminating water
11 releases for purpose of complying with the
12 PG&E contract on annual generated energy and
13 water supply to ICWA were less than 1 percent
14 in each case. (Reading.)

15 Do you see that sentence?

16 DR. ARORA: Right.

17 MR. LILLY: What do you mean by the term "complying
18 with the PG&E contract"?

19 DR. ARORA: I think that probably is misnomer here. It
20 should have been current practices simulating.

21 MR. LILLY: So it would have been better to say "comply
22 with the current practice scenario"?

23 DR. ARORA: Yes.

24 MR. LILLY: Thank you.

25 I next have some questions about Exhibit S-SWRCB-3, if

1 you can get that one in front of you. And I will state for
2 the record just for ease of reference we have made some
3 overhead copies of pages from that exhibit which Mr.
4 Grinnell will put on the overhead projector so you can look
5 up there or read along. These are just copies from your
6 exhibit.

7 First of all, just to clarify, Table 1, which was Page
8 3 from your Exhibit 3, shows basically by comparing
9 scenarios 1 and 5 and then by comparing scenarios 2 and 6,
10 you have come up with estimates of the effects of the Draft
11 Decision; is that correct?

12 DR. ARORA: Yes.

13 MR. LILLY: Basically, under the present level of
14 demand the effects of the decision or long-term average is
15 20,000 acre-feet per year?

16 DR. ARORA: Yes.

17 MR. LILLY: During the 1928 through '34 drought cycle,
18 that goes up to 50,000 acre-feet per year?

19 DR. ARORA: Yes.

20 MR. LILLY: The corresponding numbers at full
21 development demand are 33- and 68,000 acre-feet per year?

22 DR. ARORA: Yes.

23 MR. LILLY: Now I am going to ask Mr. Grinnell to put
24 up the next slide. This is Figure 1 from your exhibit.
25 Just to clarify, this shows the amounts of the curtailments

1 on more of a year-by-year basis with the years ordering
2 terms from driest to wettest; is that correct?

3 DR. ARORA: Yes.

4 MR. LILLY: During the approximately 5 percent of the
5 driest years of the impact of Draft Decision, and this is at
6 present level of demand, is actually about 150,000 acre-feet
7 per year; is that correct?

8 DR. ARORA: Yes.

9 MR. LILLY: So, with the total delivery being just
10 over 300,000 acre-feet per year, this would actually be
11 almost a 50 percent cutback in such years; is that correct?

12 DR. ARORA: That's true.

13 MR. LILLY: Let's go on to Figure 2, which is the same
14 type of figure at full development level demands; is that
15 correct?

16 DR. ARORA: Yes.

17 MR. LILLY: This shows the impact of the Draft Decision
18 at the higher levels of demand; is that correct?

19 DR. ARORA: Right.

20 MR. LILLY: First of all, the top line shows that even
21 with the current instream flow requirements under Study 2
22 there would be a cutback in deliveries of about 75,000
23 acre-feet per year, in one year; is that correct?

24 DR. ARORA: That's right.

25 MR. LILLY: With the Draft Decision there would be

1 additional cutbacks which are represented by the differences
2 between those two lines?

3 DR. ARORA: Right.

4 MR. LILLY: The Draft Decision would cause cutbacks of
5 almost 200,000 acre-feet per year during approximately the
6 10 percent driest years; is that correct?

7 DR. ARORA: That's true.

8 MR. LILLY: And the Draft Decision would result in some
9 cutbacks of differing magnitudes in almost 20 percent of all
10 years; is that correct?

11 DR. ARORA: Yes, seems like.

12 MR. LILLY: Now I am going to go on to the next
13 overhead, and I will state for the record this is not from
14 Mr. Arora's testimony. This was a transmittal letter which
15 was dated February 10, 1999, from Mr. Schueller, Chief of
16 Division of Water Rights, to all parties, which transmitted
17 the staff analysis and Draft Decision. I am not going to
18 offer this as a separate exhibit. It already is in the
19 staff exhibits.

20 Mr. Arora, I would like you to just look at one
21 sentence in this, and if you can't read -- we will try to
22 get the best focus as we can. The sentence is highlighted
23 with bars here, the last sentence of the third paragraph of
24 this first page of this letter says:

25 As described in the staff analysis, YCWA

1 would be able to meet the proposed flow
2 standards without any reduction in water
3 deliveries within its service area.

4 (Reading.)

5 I am going to ask you, do you agree or disagree with
6 that statement, based on your hydrological analysis of the
7 Draft Decision?

8 DR. ARORA: My analysis show that there will be
9 reductions in some years.

10 MR. LILLY: You would disagree with the statement; is
11 that correct?

12 DR. ARORA: Yes.

13 MR. LILLY: Let's go forward -- Mr. Grinnell, the next
14 overhead is just the second page of the letter. Let's go
15 forward to the next overhead, Table A-24 from your Exhibit
16 3, Mr. Arora.

17 This basically shows the modeled deficiencies in
18 deliveries to Yuba County Water Agency customers on
19 year-by-year basis; is that correct?

20 DR. ARORA: Yes.

21 MR. LILLY: So, this is under, this being Study 6,
22 shows the deficiencies with the State Board Draft Decision
23 at full levels of demand, correct?

24 DR. ARORA: Yes.

25 MR. LILLY: Just going through the numbers, and we have

1 an overhead of the next page as well, we couldn't fit
2 everything on one overhead.

3 Isn't it true there are, in fact, 12 years where there
4 are deficiencies in greater than 100,000 acre-feet per year
5 shown?

6 DR. ARORA: I didn't count them.

7 MR. LILLY: Does that sound right?

8 DR. ARORA: Yes.

9 MR. LILLY: I understand the numbers speak for
10 themselves. I just want your clarification.

11 For the drought periods you used 1928 through '34; is
12 that correct?

13 DR. ARORA: That's true.

14 MR. LILLY: Is there any particular reason why you
15 used that drought period?

16 DR. ARORA: No particular reason. That is drought
17 people have been referring to for many other purposes.

18 MR. LILLY: Now on Exhibit 8 -- Table A-24 from your
19 testimony, focusing on that drought period, I see it looks
20 like there would be deficiencies modeled for 1929, 1931 and
21 1934; is that correct?

22 DR. ARORA: Right.

23 MR. LILLY: Basically, three out of seven years?

24 DR. ARORA: Yes.

25 MR. LILLY: Now if you go forward to the next page of

1 Table A-24 and look at the 1987 through 1992 drought period,
2 can you do that, please?

3 DR. ARORA: Yes.

4 MR. LILLY: That table shows deficiencies during four
5 of six years during that drought period; is that correct?

6 DR. ARORA: Right.

7 MR. LILLY: So, I don't know if you have -- have you
8 done the arithmetic to see what the average deficiency would
9 be during that drought period?

10 DR. ARORA: A little higher, but I don't know what the
11 number would be, but it would be high.

12 MR. LILLY: I am not going to ask you to do
13 calculations right now, but basically if we wanted to figure
14 out that deficiency, we would just add up those four
15 numbers, and then, using your methodology, we would divide
16 it by five and a half; is that correct?

17 DR. ARORA: Yeah. If you wanted to start spring of
18 '87, yeah.

19 MR. LILLY: But consistent with the methodology you did
20 for 1928 through '34, since it is one less year for this
21 drought period, we divide by five and a half instead of six
22 and a half; is that correct?

23 DR. ARORA: Not quite, if you are asking the question,
24 how we do model studies up there. The drought in this
25 sequence is supposed to begin in '86, the spring of '86.

1 So, it would still be six and a half years. Spring of '86
2 through end of '92.

3 MR. LILLY: Does that make any sense because 1986 was
4 one of the wettest years of record?

5 DR. ARORA: However, sir, the last time the reservoir
6 was full was spring of '86. That is what my study shows.

7 MR. LILLY: So you would --

8 DR. ARORA: If you're going to use my methodology, that
9 is what we have been using. That is drought begins and
10 ends, begins '86 or spring of '86 and ends in '92 like we
11 did spring of 1928 and ends 1934.

12 MR. LILLY: You would take these numbers and add them
13 up and divide by six and a half?

14 DR. ARORA: Yes, six and a half.

15 MR. LILLY: Thank you.

16 Let's go forward to Table A-29. I think Ms. Low asked
17 some questions about this. I just want to get some
18 clarification.

19 What does this Table A-29 show?

20 DR. ARORA: It simply shows the months and years, when
21 you see some number, that there was violation of the flow
22 requirements and that number is, in this case, 270 cfs less
23 for the standard in that month.

24 MR. LILLY: I guess you're pointing to the second page
25 of this table?

1 DR. ARORA: Yes, that's right.

2 MR. LILLY: For the water, it is water year --

3 DR. ARORA: I am looking second page where we have
4 1978, second month in that year that we have a shortfall of
5 270 cfs.

6 MR. LILLY: That is water year 1978, but it is really
7 the end of 1977?

8 DR. ARORA: Yes.

9 MR. LILLY: Why is there this shortage, according to
10 your modeling work?

11 DR. ARORA: Seems to be we are out of water in the
12 reservoir.

13 MR. LILLY: In fact, if we go to Table A-7 from your
14 Exhibit 3, this shows end of month storage at New Bullards
15 Bar Reservoir; is that correct?

16 DR. ARORA: Which table is that?

17 MR. LILLY: A-7. I see you are on the second page of
18 A-7; is that correct?

19 DR. ARORA: Yes.

20 MR. LILLY: Basically, the entries for 1978 for
21 October, November both are 234,000?

22 DR. ARORA: No water for delivering anything.

23 MR. LILLY: 234,000 means the reservoir is at its dead
24 pool?

25 DR. ARORA: Minimum pool.

1 MR. LILLY: Even though there is water in the reservoir
2 at that point, the Agency cannot release any more water?
3 DR. ARORA: That is my understanding.
4 MR. LILLY: Let's go forward to Table A-31.
5 Do you have A-31 there?
6 DR. ARORA: Yes, I have.
7 MR. LILLY: Just to clarify, when you looked at A-29
8 that was Study 5 which was present level demands, where this
9 is Study 6, full development; is that correct?
10 DR. ARORA: Right.
11 MR. LILLY: The second page of Table A-31 shows the
12 instream flow requirement would not be met during four
13 months; is that right?
14 DR. ARORA: That's right.
15 MR. LILLY: Again, this is the end of the 1997 drought
16 period?
17 DR. ARORA: That's right.
18 MR. LILLY: What is the reason for those flow
19 requirements not being met during those four months?
20 DR. ARORA: Again, you don't have water in the system.
21 MR. LILLY: Again, New Bullards Bar Reservoir storage
22 is down to the minimum pool?
23 DR. ARORA: That's right.
24 MR. LILLY: I won't ask you -- yes, I will. If you
25 just look at Table A-9, can we just confirm that that is, in

1 fact, what Table A-9 would show?

2 Mr. Grinnell, if you could put up the second page A-9.

3 Does this show storage at 234,000 for four different
4 months during that drought cycle?

5 DR. ARORA: Yes.

6 MR. LILLY: I'm going to ask Mr. Grinnell to put up the
7 overhead of Page 162 from the Draft Decision, and in
8 particular the second table here shows proposed daily
9 average water temperature requirements for different times
10 of the year. Some specified Daguerre Point Dam and some at
11 the Marysville gauge.

12 Are you aware that the Draft Decision contains these
13 proposed water temperature requirements?

14 DR. ARORA: I am not aware of that. I do not review
15 that paper.

16 MR. LILLY: Could you speak into the microphone.

17 DR. ARORA: I do not review this package.

18 MR. LILLY: So neither you nor anyone else at the
19 Department of Water Resources did any technical analyses
20 regarding these water temperatures, proposed water
21 temperature requirements?

22 DR. ARORA: Once again, I was just to do the study from
23 memo from Tom Howard, and they were spelled out exactly what
24 I needed to do the modeling.

25 MR. LILLY: Do you know what the Yuba County Water

1 Agency would have to do to comply with temperature
2 requirements like this if they were adopted by the State
3 Water Board?

4 MR. BAIOCCHI: Mr. Brown.

5 H.O. BROWN: Mr. Baiocchi.

6 MR. BAIOCCHI: I object, Mr. Brown. The doctor has
7 modeled the hydrology of the river. That is nothing to do
8 with water temperature. He is not an expert on water
9 temperature, no fisheries. I think Alan has, Mr. Lilly,
10 rather, has overreached on this.

11 H.O. BROWN: Mr. Lilly.

12 MR. LILLY: Obviously, the focus of this hearing is the
13 feasibility of the Agency to satisfy the Draft Decision.
14 And temperature requirements are in the Draft Decision. I
15 think it is appropriate for me to ask whether in DWR's
16 analysis of the feasibility of the Agency's meeting this
17 decision included any analysis of the water temperature
18 studies.

19 H.O. BROWN: I agree.

20 Answer the question if you can.

21 DR. ARORA: We did not model -- as I mentioned, we
22 modeled what was requested by the Board staff. It did not
23 have temperature requirement in that request.

24 MR. LILLY: Thank you, Dr. Arora.

25 I have no further questions. And, Mr. Brown, at this

1 time I would ask that Exhibit S-YCWA be admitted into the
2 record in this hearing.

3 H.O. BROWN: Mr. Frink, you want that in the record
4 right now?

5 MR. FRINK: Excuse me, I am sorry, what document was
6 requested?

7 MR. LILLY: Mr. Frink, I asked that S-YCWA-23, which
8 was the July 1999 letter, be received into evidence at this
9 point.

10 MR. FRINK: How about if it is marked for
11 identification and you can offer all of your exhibits at the
12 conclusion of your case, Mr. Lilly, so we don't lose track
13 what is in and what isn't.

14 MR. LILLY: I am glad to wait to the conclusion of Mr.
15 Arora's testimony. That would be the appropriate time.
16 Since this was used for cross-examination of him, I think we
17 need to make sure it is done while he is still here in case
18 any questions need to be directed to him.

19 MR. FRINK: I have no objection to the letter being
20 admitted.

21 H.O. BROWN: Are there any objections to the admission
22 of that into evidence?

23 If not, so admitted.

24 Mr. Baiocchi.

25 MR. BAIOCCHI: Yes. Mr. Lilly hit on the power

1 agreement between PG&E and Yuba County Water Agency. Has
2 that been submitted into the record for this hearing?

3 MR. FRINK: I believe it is in the record from the
4 prior hearing.

5 MR. BAIOCCHI: Is there any way that we can get a copy
6 of that, the PG&E/Yuba County Water Agency Agreement. The
7 '92 hearing, the records, I have about 2,000 feet of paper
8 probably stacked over them, if you know what I mean.

9 MR. FRINK: Right now it will take us a little bit of
10 time to pull that out, but we can get it for you.

11 MR. BAIOCCHI: I think that it is pertinent we can
12 cross-examine Donn Wilson and whoever, concerning that
13 PG&E/Yuba County Water Agency power agreement that he's made
14 a major issue over it.

15 Thank you.

16 H.O. BROWN: Mr. Frink, if you would see to that.

17 Does anyone else have the same request?

18 Okay. Next up is South Yuba Water District, Mr.
19 Minasian.

20 MR. MINASIAN: Hearing Officer Brown, may I do the
21 cross-examination for both Cordua and South Yuba at the same
22 time?

23 H.O. BROWN: Sure.

24 ----oOo----

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1 CROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD
2 DIVISION OF WATER RIGHTS
3 BY CORDUA IRRIGATION DISTRICT AND SOUTH YUBA WATER DISTRICT
4 BY MR. MINASIAN

5 MR. MINASIAN: Dr. Arora, would you look at Pages 20
6 and 22. You very courteously put these in handwriting, and
7 it is very helpful.

8 These are the outflow from Bullards Bar, Study 9, which
9 is Page 20, and Page 22 is the end of the month storage at
10 New Bullards Bar in acre-feet, Study No. 9.

11 I wonder if you can look for me at the years 1977 and
12 '78, which, of course, are the drought years of '76-77.

13 Is one of the purposes of modeling to help us
14 understand what would happen if we do certain things?

15 DR. ARORA: That's true.

16 MR. MINASIAN: Do these figures show that Bullards Bar
17 Reservoir from July through the latter part of March is at
18 dead storage for approximately six months?

19 DR. ARORA: Yes. Of course, definitely four months
20 when is showing 234,000 acre-feet in their storages.

21 MR. MINASIAN: And that is on Page 22. I am sorry I
22 don't have an overhead for the Board Member. But on Page 20
23 it also shows the outflow that is available in cubic feet
24 per second on a 30-day month-step basis; does it not?

25 DR. ARORA: Yes.

1 MR. MINASIAN: In that same period?

2 DR. ARORA: Yes.

3 MR. MINASIAN: The outflow as an example in September
4 of 1977 is 53 cfs on an average for 30 days?

5 DR. ARORA: Yes.

6 MR. MINASIAN: Now, 53 cfs, based upon your experience
7 with this model, if someone tried to run that through the
8 river down to Marysville, it wouldn't even arrive, would
9 it?

10 DR. ARORA: I don't know, sir.

11 MR. MINASIAN: So, based upon using this model to kind
12 of let us know what we are going to get if we adopt the
13 requirements of the proposed decision, we are basically
14 going to get a dry Bullards Bar Reservoir, dry river, for
15 about five months in a drought that we actually have had,
16 aren't we?

17 DR. ARORA: Yes.

18 MR. MINASIAN: And what is going to happen to the fish
19 during that period of time?

20 DR. ARORA: I am sorry, I can't make any comment on
21 those.

22 MR. MINASIAN: Usually if the river is dry, the fish
23 don't prosper?

24 DR. ARORA: I think so.

25 MR. MINASIAN: Dr. Arora, could you indicate to me what

1 is going to happen to the wildlife that would be using the
2 irrigated --

3 MR. SANDERS: Objection. This witness is not a
4 fisheries or wildlife expert.

5 H.O. BROWN: Wait a minute.

6 MR. SANDERS: He can only speculate what is going to
7 happen to the wildlife.

8 H.O. BROWN: Please, when you object, just please stand
9 to be recognized and at the appropriate time I will hear the
10 objection.

11 MR. SANDERS: This expert is not qualified to testify
12 about what will happen to the fishery resources or the
13 wildlife resources. He is a hydrologist, not a biologist.

14 H.O. BROWN: Thank you, Mr. Sanders.

15 Mr. Minasian.

16 MR. MINASIAN: My response is that this is preparatory
17 to try to explain how Dr. Arora believes the model should be
18 used by the Board and staff in deciding what flows should
19 then, the limitations of the model.

20 H.O. BROWN: Thank you.

21 MR. MINASIAN: I don't pretend or attempt to make you
22 an expert in regard to the uses of water for beneficial
23 purposes, Doctor. So --

24 H.O. BROWN: Let me rule.

25 If you know the answer to the question, go ahead and

1 answer it.

2 DR. ARORA: I don't know. I just mention earlier.

3 H.O. BROWN: Proceed.

4 MR. MINASIAN: So, let's focus on Page 20, which is the
5 -- well, actually I tell you what's let's do. Take Page 20,
6 cfs in July, August and September of 1977, coming out of the
7 Bullards Bar. You see in August, as an example, that there
8 is an average of 410 cfs coming out of Bullards Bar?

9 DR. ARORA: Yes.

10 MR. MINASIAN: Now, in September there is average of 53
11 cfs coming out, isn't there?

12 DR. ARORA: Right.

13 MR. MINASIAN: Based upon your knowledge of this model,
14 when we go to October we have a 71 cfs coming out on an
15 average daily basis?

16 DR. ARORA: Right.

17 MR. MINASIAN: Based on this scenario?

18 DR. ARORA: Right.

19 MR. MINASIAN: Is there any question in your mind that
20 the 53 cfs in September and 71 cfs in October would never
21 even reach Marysville?

22 DR. ARORA: If I remember correctly, these two months
23 we might have made some diversion.

24 MR. MINASIAN: Well, we can look at --

25 DR. ARORA: The diversion tables for that study, the

1 deliveries table, that is -- now we have to --

2 MR. MINASIAN: Your model basically assumes that the
3 agricultural users took deficiencies in accordance with the
4 demand schedule and the contracts they have, does it not?

5 DR. ARORA: That's right.

6 MR. MINASIAN: From the point of view of keeping a
7 temperature in the river or keeping a live flow, your
8 schedule actually shows there is tremendous deficiencies,
9 there is no water in the river?

10 DR. ARORA: That's true.

11 MR. MINASIAN: Thank you.

12 Nothing further.

13 MR. CUNNINGHAM: Mr. Brown.

14 H.O. BROWN: Yes, sir, go ahead.

15 MR. CUNNINGHAM: Could I object and have that last
16 question stricken?

17 Again, this witness is not testifying as to flows in
18 the river. In fact, I think Mr. Minasian misstated the
19 evidence before the Board as provided by this witness.
20 This witness is testifying only as to flows out of New
21 Bullards Bar Reservoir on the North Fork of the Yuba River.
22 He has not testified there would be flows remaining in the
23 river below the project reach coming from the Middle Fork
24 and the South Fork of the Yuba River.

25 Therefore, the question asked will there be any water

1 left in the channel at Marysville, I believe, misstates the
2 evidence and testimony of this witness.

3 H.O. BROWN: Thank you, Mr. Cunningham.
4 Mr. Minasian.

5 MR. MINASIAN: May I ask a follow-up question to
6 clarify the objection?

7 H.O. BROWN: Yes.

8 You have included a number of charts which refer to the
9 flows at Marysville in various studies, have you not,
10 Doctor?

11 DR. ARORA: Yes.

12 MR. MINASIAN: So the model runs that you actually did
13 for Study 5 and Study 9 actually do quantify for us the
14 amount of the shortfall at Marysville, do they not?

15 DR. ARORA: We have measure in the package, I think in
16 the package.

17 MR. MINASIAN: If you want it as an example, you can
18 look at Table A-30, which is Study 6, Table A-9, 29 which is
19 study Number 5. And let me find 9, which is Table A-32 on
20 Page 63.

21 H.O. BROWN: Okay. I will allow the question and the
22 answer.

23 We will take a recess for lunch and meet back here
24 again at 1:00.

25 Mr. Gallery is up. I don't see Mr. Gallery here, but

1 he will be up at 1:00.

2 Recess until then.

3 (Luncheon break taken.)

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AFTERNOON SESSION

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H.O. BROWN: We will call the meeting back to order.
Next up. The Brophy Water District, Mr. Gallery.
Is Dan around? Has anyone seen Dan at lunchtime?

MR. MINASIAN: I don't believe Dan intends to -- this
is Paul Minasian. I don't believe he intends to
cross-examine.

H.O. BROWN: Thank you, Paul.

Browns Valley Irrigation District, Ryan Bezerra.

MR. COOK: May I introduce myself?

H.O. BROWN: Yes, sir.

MR. COOK: I am Mr. Cook. I missed this morning. I am
Walter Cook, and I apologize for not having had an
opportunity to be here. But I am here now and so I will be
sitting right here.

H.O. BROWN: Nice to have you here, Mr. Cook.

(Court Reporter adjusts paper.)

H.O. BROWN: Back on the record.

Mr. Bezerra, you are next.

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1 CROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD
2 DIVISION OF WATER RIGHTS
3 BY BROWNS VALLEY IRRIGATION DISTRICT
4 BY MR. BEZERRA

5 MR. BEZERRA: Good afternoon, Dr. Arora. I am Ryan
6 Bezerra. I am an attorney for Browns Valley Irrigation
7 District. I just have a few questions for you.

8 If I can refer you to Exhibit S-SWRCB-3, Technical
9 Memorandum Lower Yuba River Operations Studies.

10 DR. ARORA: Okay.

11 MR. BEZERRA: Then to Table A-30 on Page 59.

12 DR. ARORA: Okay.

13 MR. BEZERRA: Can you please read the title of the
14 table for me?

15 DR. ARORA: It says Flow in Yuba River at Marysville in
16 cfs.

17 MR. BEZERRA: On to the next page, on Page 60, for
18 water year '77.

19 DR. ARORA: Right.

20 MR. BEZERRA: To the far right column which would be
21 September 1977.

22 DR. ARORA: Uh-huh.

23 MR. BEZERRA: Can you tell me what the number is there
24 reflecting the flow at Marysville?

25 DR. ARORA: Yeah. The numbers are zeros in these two

1 months, September '77 and October '78.

2 MR. BEZERRA: Thank you very much.

3 H.O. BROWN: Western Water Company, Western Aggregate.
4 Mr. Morris.

5 MR. MORRIS: Thank you, Mr. Brown. We have no
6 questions at this time, no cross-examination. Thank you.

7 H.O. BROWN: You're welcome, Mr. Morris.

8 Mr. Cunningham, California Department of Fish and
9 Game.

10 MR. CUNNINGHAM: Thank you, Mr. Brown. William
11 Cunningham. We have no questions for this witness, but
12 would like to thank him for his time.

13 H.O. BROWN: Mr. Sandino.

14 MR. SANDINO: We don't have any questions.

15 H.O. BROWN: Mr. Cook, it might be a little difficult
16 for you to cross, but you are on the list, if you have
17 anything you would like to cross about.

18 MR. COOK: Thank you for allowing me that privilege. I
19 will waive that cross-examination.

20 H.O. BROWN: All right.

21 Counselor, redirect.

22 MR. FRINK: Yes, Mr. Brown, we do have a few
23 questions.

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1 REDIRECT EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD

2 DIVISION OF WATER RIGHTS

3 BY STAFF

4 MR. FRINK: I wanted to clarify something, Dr. Arora,
5 about the deficiencies in water deliveries or instream flows
6 identified in your modeling.

7 Is it correct that your model used the number for the
8 present level of demand that is based on estimated demand
9 rather than historical water deliveries or an average of
10 historical water deliveries?

11 DR. ARORA: The number we used in modeling study is
12 estimated demand as compiled by Yuba County Water Agency.

13 MR. FRINK: You didn't compare that historical?

14 DR. ARORA: We did not compare it to historical
15 deliveries.

16 MR. FRINK: If actual water deliveries were less than
17 the present estimated demand, would you expect more water to
18 be available for water deliveries or instream flows?

19 DR. ARORA: Yes.

20 MR. FRINK: In your modeling of the instream flows
21 specified in the 1996 Draft Decision, did you make any
22 changes in the assumptions governing instream flows or
23 future water deliveries as you did a model run that were
24 determined based on the amount of water remaining in storage
25 at the end of a particular year?

1 DR. ARORA: The way the model operates is the model
2 does automatically not cut back delivery to meet certain
3 requirements, so we have two iterations to determine what
4 should be the delivery in a given year so that we meet the
5 requirements, and they're complicated rules in the model,
6 basically. Need to have some carryover storage for next
7 year so on and so forth.

8 However, the model does compute that, that detail, that
9 is iteration of the model. That is one more facet of the
10 model. Then we zero down on these. These are the
11 deficiencies we have to impose to meet our required storage,
12 carryover storage, and the flow requirements instream.

13 MR. FRINK: The rules that were set out in the
14 beginning in terms of carryover storage or instream flow
15 requirements, did those rules continue to apply throughout
16 the studies?

17 DR. ARORA: Yes, that's true. The rules are the same
18 for all studies. However, you have to play with the
19 deficiencies to come up with in a given scenario.

20 MR. FRINK: Your resume indicates you have done
21 extensive modeling work for the Department of Water
22 Resources. In that work do you often run a variety of
23 modified model runs to try and avoid problems that would
24 occur if you stuck with the initial set of rules?

25 DR. ARORA: We do several what-if scenarios.

1 MR. FRINK: Is it your understanding that the flows in
2 the 1996 Draft Decision had been modeled by anybody before
3 you and your staff undertook that project?

4 DR. ARORA: My impression is that they were modeled by
5 the Yuba County Water Agency consultants because we got some
6 information when we were working with them, and it first
7 occurred with their operations input file and things like
8 that.

9 MR. FRINK: Did you discuss deficiencies that YCWA
10 consultants had identified?

11 DR. ARORA: Once we got the model, we had to compare
12 model, whether working or not with computer system. We
13 really had to compare with the input-output files to see
14 that model operates where they have given us, so our
15 computer system doing good job. Once we've done that, then
16 we do the studies.

17 MR. FRINK: Did the Division of Water Rights ask you to
18 do any further iterations that haven't been described in
19 your written statement?

20 DR. ARORA: No. What we had done, we give the
21 memorandum report on that.

22 MR. FRINK: I did have another question. On Table A-30
23 of Exhibit 3 that was mentioned just a few minutes ago, for
24 the month of September, I believe, in 1977 it showed flows
25 of zero cfs at Marysville. Does that account for inflow

1 below Daguerre Point Dam?

2 DR. ARORA: Yes. They are flows at Marysville.

3 MR. FRINK: This is flow from all sources?

4 DR. ARORA: All sources.

5 MR. FRINK: Thank you.

6 MR. FRINK: I believe that is all the redirect,

7 Mr. Brown.

8 H.O. BROWN: Recross. National Marine Fisheries, Mr.

9 Edmondson.

10 MR. EDMONDSON: We have no recross at this time.

11 H.O. BROWN: Department of Interior, Mr. Gee.

12 MR. GEE: I have no recross.

13 H.O. BROWN: California Sportfishing, Mr. Baiocchi.

14 MR. BAIOCCHI: I have no recross.

15 H.O. BROWN: Let's see a show of hands if there is

16 anybody that wants to recross.

17 Okay, Paul, you are up.

18 ---oOo---

19 RE-CROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD

20 DIVISION OF WATER RIGHTS

21 BY CORDUA IRRIGATION DISTRICT & SOUTH YUBA WATER DISTRICT

22 BY MR. MINASIAN

23 MR. MINASIAN: Mr. Arora, on behalf of -- Dr. Arora, on

24 behalf of Cordua and South could I ask you in layman's terms

25 to address the following hypothetical: Would you turn to

1 Page 49 and 50 which is Table A-25. It bears the label
2 Diversion at Daguerre Point Diversion Dam, Study No. 9?

3 DR. ARORA: Okay.

4 MR. MINASIAN: Got that?

5 DR. ARORA: Yes.

6 MR. MINASIAN: We focused on the events of '76 and '77
7 water years which are actual events. Most of us have
8 experienced those in our lifetime.

9 Would you look over at the diversions in the months of
10 July and August, as an example, in '76 and '77 water year
11 and compare those amounts to, as an example, the '75 water
12 year. Do you see the amounts in '76 and '77 are about
13 one-half of the monthly diversion in the previous year, and
14 you know '74 was a relatively wet, don't you?

15 DR. ARORA: Yes.

16 MR. MINASIAN: Does that indicate to you that the model
17 you were working with applied deficiency of about 50 percent
18 to all water users under Study 9 in Yuba County?

19 DR. ARORA: Under this scenario, yes.

20 MR. MINASIAN: Bring that back now to the dialogue you
21 and I had in regard to the river running out of water for
22 almost five months in that same period. Could you describe
23 to us in layman's terms what the model is telling us about
24 the feasibility of the employing the Draft Decision and
25 keeping water in the river and supplying irrigation needs?

1 DR. ARORA: If I treating the happening, one is that we
2 have applied deficiency of 50 percent, number one. Number
3 two, the other one has gone broke; we are at the bottom of
4 those months and at least I think most months. I am not
5 sure exactly, but I think September, October, that time of
6 year, we broke. And number three, we did short the
7 requirements.

8 MR. MINASIAN: Just to refresh your recollection, if
9 you looked at the, I think, Pages 20 and 22, didn't it go
10 broke for five months? 22 as an example gives us the dead
11 storage at Bullards Bar for five months, doesn't it?

12 DR. ARORA: Yes, four months early. July, August --
13 no. August, September of '77 and October, November of
14 1978. The storage is a little higher. Higher means --

15 MR. MINASIAN: That is when we use a monthly step and
16 we see 311,000 instead of 254, we know something flowed in,
17 but we don't know if it flowed in one day or 30 days?

18 DR. ARORA: Yeah, yeah.

19 MR. MINASIAN: So, from a layman's point of view, is
20 the model telling us that the regimental water being run in
21 Study No. 9 doesn't work in a drought that we have all
22 historically experienced?

23 DR. ARORA: Yes. Seems that couple of three, four
24 months you have problem in the system. Somebody has to give
25 back.

1 MR. MINASIAN: Thank you.

2 H.O. BROWN: Does that complete the recross?

3 MR. CUNNINGHAM: Mr. Chairman, may I ask a couple of
4 questions on cross now based on what Mr. Minasian asked?

5 H.O. BROWN: Go ahead. I will allow it.

6 MR. CUNNINGHAM: I apologize. Initially I didn't think
7 I would have any questions.

8 H.O. BROWN: Normally I take you in order and if you
9 miss your order --

10 MR. CUNNINGHAM: I am I think just about the last
11 party.

12 H.O. BROWN: We didn't establish a rule.

13 MR. CUNNINGHAM: Thank you.

14 ---oOo---

15 RECROSS-EXAMINATION OF STATE WATER RESOURCES CONTROL BOARD

16 DIVISION OF WATER RIGHTS

17 BY DEPARTMENT OF FISH AND GAME

18 BY MR. CUNNINGHAM

19 MR. CUNNINGHAM: Dr. Arora, in answer to the last
20 questions asked of you about the deficiencies in the '76-77
21 period of time, is it my understanding that those
22 deficiencies you calculated through your model do not
23 reflect an actual, real world deficiency; in truth there was
24 no deficiency in that system at that point in time?

25 DR. ARORA: This is model information. I am talking

1 model demand, what we impose, and we applied to. I am not
2 aware of real world time what happened.

3 MR. CUNNINGHAM: The flows you used to calculate these
4 deficiencies were not on the actual diversions made by the
5 district in 1976 and 1977, were they?

6 DR. ARORA: They are the actual demand imposed on the
7 study which may be different than actual deliveries.

8 MR. CUNNINGHAM: The model as it is currently designed
9 does not take into consideration any other kinds of water
10 management procedures or programs that might have been put
11 in place by a water district if it were to be confronted
12 with a deficiency in delivery? You don't have any
13 conservation --

14 DR. ARORA: No. My model doesn't have any water
15 management scenarios.

16 MR. CUNNINGHAM: Thank you.

17 H.O. BROWN: Mr. Cunningham, thank you.

18 MR. CUNNINGHAM: Thank you, sir.

19 MR. FRINK: I believe that completes the examination of
20 Dr. Arora. We would thank him and excuse him at this time,
21 Mr. Brown.

22 H.O. BROWN: All right.

23 Mr. Arora, you are excused.

24 Do you wish to --

25 MR. FRINK: Yes, we do have staff exhibits that we

1 would like to offer into the record. As was explained in
2 the hearing notice, Staff Exhibit 1 through 7 from the prior
3 hearing include a number of files and data reports, most of
4 which have been augmented with most recent information.
5 Instead of renumbering those we would like to maintain the
6 same numbers and offer them into evidence with the more
7 recent information.

8 In addition, staff would like to offer into evidence
9 the documents that were identified as Exhibits S-SWRCB-1
10 through S-SWRCB-8, which were discussed by Dr. Arora, and I
11 would like to have those exhibits accepted into evidence at
12 this time.

13 H.O. BROWN: Mr. Frink, is there any objection to the
14 acceptance of those exhibits?

15 MR. LILLY: Mr. Brown, this is Alan Lilly for Yuba
16 County Water Agency. We do not object to the supplemental
17 Exhibits 1 through 8. As far as the additions to the files
18 that were previously accepted into evidence in the 1992
19 hearing, we would just like the same clarification that we
20 got in 1992, and that is under what is now Government Code
21 Section 11513, Subdivision D, there are limitations on the
22 use of hearsay evidence, and obviously those files contain
23 large amounts of hearsay evidence. We do not object to them
24 being accepted into the record so long as it is clear on the
25 record that the Board will only be allowed to use those

1 exhibits and any hearsay in them subject to the hearsay
2 statute.

3 H.O. BROWN: Is it all right with you, Mr. Frink?

4 MR. FRINK: Yes. That was our intention, Mr. Brown.

5 H.O. BROWN: With that so noted, Mr. Lilly, those
6 exhibits will be accepted into evidence.

7 Next up on direct is the National Marine Fisheries, Mr.
8 Edmondson.

9 ---oOo---

10 DIRECT EVIDENCE OF NATIONAL MARINE FISHERIES SERVICE

11 BY MR. EDMONDSON

12 MR. EDMONDSON: Mr. Brown, I am Steve Edmondson with
13 the National Marine Fisheries Service. Again, I would like
14 to note for the record that I am appearing today without the
15 assistance of legal counsel. I would like to request or
16 reserve the right to clarify any of my responses that I give
17 in cross-examination or recross because of that.

18 H.O. BROWN: Mr. Frink.

19 MR. FRINK: I am not sure exactly what you are
20 intending to reserve the right to clarify your responses.
21 Do you mean after the record is closed you may wish to
22 submit additional material?

23 MR. EDMONDSON: No additional or to restate my
24 responses, in a sense or in essence to redirect myself.

25 MR. FRINK: Certainly. After you give your direct and

1 you're cross-examined, there is no one else to ask you
2 questions on redirect. But if you wish to clarify some
3 points --

4 MR. EDMONDSON: Clarify some of my responses.

5 H.O. BROWN: You will be allowed to do that.

6 Go ahead.

7 MR. EDMONDSON: I have already submitted written
8 testimony. I propose to merely briefly summarize, update
9 and clarify the written testimony that I have already
10 brought here to the record.

11 Again, I am Steve Edmondson with the National Marine
12 Fisheries Service. I serve as a team leader, fisheries
13 biologist in Northern California Habitat Conservation
14 Division of the United States Department of Commerce,
15 National Marine Fisheries Service. My primary
16 responsibility is to coordinate planning and implementation
17 of activities to restore habitat for salmonids listed under
18 the Endangered Species Act and provide expert technical
19 assistance to staff biologists regarding water rights law,
20 instream flow requirements for listed salmonids.

21 I have worked as a fisheries biologist for the federal
22 government for over 15 years. The majority of that time has
23 been spent mostly looking at the relationship between
24 instream flows and fishery resources and instream flow and
25 habitat protection for fishing. Specifically, I worked for

1 eight years as a senior analyst for the Federal Energy
2 Regulatory Commission and was staff expert on instream flow
3 issues and IFIM and PHABSIM applications.

4 The National Marine Fisheries Service is responsible
5 for protecting and managing and recovering Pacific salmon
6 and their habitats under the ESA and other federal
7 regulatory laws. Under the NMFS fairly mandated
8 responsibilities, if a marine or anadromous species may need
9 protection under the ESA NMFS first determines whether the
10 species qualifies for listing as either endangered or
11 threatened, and then under Section 4 of the ESA NMFS must
12 also determine the extent of critical habitat to sustain the
13 survival of each species and provide for its recovery and
14 then list the species or critical habitat.

15 NMFS has designated Central Valley spring-run chinook
16 salmon in the Yuba River as a federally listed threatened
17 species on September 16th. This is where I would like to
18 update my written testimony. On February 16th, NMFS listed
19 critical habitat in the Yuba River for spring-run chinook
20 salmon.

21 NMFS designated Central Valley steelhead in the Yuba
22 River as a federally listed threatened species on March
23 19th, 1998. And again I would like to update my written
24 testimony. On February 16th in that same Federal Register
25 noticed, the National Marine Fisheries Service listed or

1 designated critical habitat for Central Valley steelhead in
2 the Yuba River.

3 And, again, as an explanation, under critical habitat,
4 flow quality and quantity are considered constituent
5 elements of critical habitat. Further, the ESA requires
6 federal agencies to consult with National Marine Fisheries
7 Service where their actions may affect listed salmonids.

8 In a letter dated March 28, 1999, NMFS determined that
9 the Corps' actions surpassed the affect threshold of ESA for
10 Corps of Engineers' activities on the Yuba River and,
11 therefore, NMFS requested consultation under Section 7(A)(2)
12 of the ESA.

13 A letter dated May 12th, 1999, National Marine
14 Fisheries Service informed the Federal Energy Regulatory
15 Commission of its determination of operation of FERC
16 licensed Yuba River Project, Yuba Bear Project, Deadwood
17 Creek Project and Narrows Project directly impacts listed
18 salmonids in proposed and designated -- at that time
19 designated critical habitat in the Yuba River. In its May
20 12th letter NMFS provided a list of supporting documentation
21 to that effect.

22 By letter dated August 5th, FERC requested a Section 7
23 consultation with National Marine Fisheries Service in
24 response to our request for consultation. The NMFS has
25 designated -- or FERC has designated its licensees for those

1 projects as designated nonfederal representatives for the
2 purpose of conducting the Section 7 consultations.

3 Also under the Magnusson Stevens Fisheries Conservation
4 and Management Act sets forth a number of mandates for NMFS
5 regional fisheries and management councils and federal
6 action agencies to identify and protect important marine
7 anadromous fish habitat. The councils with assistance from
8 NMFS were required to delineate essential fish habitat and
9 fishery management plans or FMP amendments for all managed
10 species.

11 Federal action agencies which fund, permit or carry out
12 activities that may adversely affect EFH are required to
13 consult with NMFS regarding potential adverse effects of
14 their actions on EFH.

15 The Pacific Fisheries Management Plan currently lists
16 the Yuba River from its confluence with the Feather River
17 upstream of Englebright Dam as essential fish habitat for
18 chinook salmon, and that includes all races.

19 I have reviewed the State Water Resources Control
20 Board's 1996 Draft Decision. This document contains the
21 State Water Resource Control Board's proposed flows, water
22 temperature and diversion protection in the Lower Yuba
23 River. Based upon the California Department of Fish and
24 Game recommendations and the need to protect listed
25 salmonids and habitat, I recommend that the State Water

1 Resources Control Board immediately adopt all provisions of
2 the 1996 Draft Decision with the following modifications:

3 I recommend that the Board adopt the California
4 Department of Fish and Game's spring spawning flows for
5 spring-run chinook salmon. And I would like to correct my
6 written testimony. In my testimony I refer to 700 cfs as
7 spawning incubation flows at Englebright Dam. The actual
8 measurement point is at the Marysville gauge.

9 I also recommend spring flows for downstream
10 emigration. The State Water Resources Control Board in its
11 1996 Draft Decision agreed with Cal Fish and Game that much
12 higher flows are needed in the spring to facilitate
13 emigration of downstream moving smolts. Unfortunately, we
14 feel at this time there is insufficient data to quantify a
15 discrete flow schedule necessary to maximize the downstream
16 movement and emigration of smolts. And, therefore, I
17 recommend the need for a study of the time of smolt
18 emigration and flow needs for the period of April 1 through
19 June 30. This study should include a variable interim flow
20 schedule for a ten-year period during which time flows of
21 800, 1,500 and 2000 cfs will be studied for their ability to
22 facilitate downstream smolt movement, migration rates of
23 alternate flows, efficacy and potential water savings of
24 pulse flows and temporal variation of downstream movement
25 should be investigated.

1 Regarding water temperature, I recommend the Board
2 adopt the following water temperature standards and make
3 them mandatory permanent requirements. Those standards are
4 the same as those recommended by California Department of
5 Fish and Game and are included in my written testimony.

6 Regarding flow fluctuations, because flow
7 fluctuations and reductions may result in mortality, i.e.,
8 take of listed salmonids by scouring or dewatering nonmobile
9 lifestages, I recommend that the terms and conditions of the
10 Yuba County's water right expressly prohibit reductions or
11 fluctuations in flow during salmonid incubation. And I
12 would like to add as clarification not only for salmonid
13 spawning and incubation but also for the presence of
14 ingravel lifestages.

15 And, finally, the NMFS Section 7 consultation with
16 FERC and requested Section 7 consultation with the Corps
17 will generate new information and analyses on impacts of
18 federal actions on listed salmonids and listed and proposed
19 critical habitat in the Lower Yuba River.

20 Pursuant to the above Section 7 consultations and the
21 new information that may be generated through those
22 consultations, NMFS may recommend or stipulate to different
23 measures than those listed above.

24 That is all I have.

25 H.O. BROWN: Thank you, Mr. Edmondson.

1 Cross-examination. Mr. Gee.

2 MR. GEE: I don't have any cross-examination,
3 Mr. Brown.

4 H.O. BROWN: Mr. Baiocchi.

5 MR. BAIOCCHI: Thank you.

6 ---oOo---

7 CROSS-EXAMINATION OF NATIONAL MARINE FISHERIES SERVICE

8 BY CALIFORNIA SPORTFISHING PROTECTION ALLIANCE

9 BY MR. BAIOCCHI

10 MR. BAIOCCHI: Mr. Brown, this is a friendly
11 witness, and I will throw some balloons at him.

12 Steve, the Board is asking if there is any new
13 information. Now, in 1992 we had a hearing here, 14, 15
14 days. Was NMFS represented at that hearing?

15 MR. EDMONDSON: I understand that we were not.

16 MR. BAIOCCHI: The reason why you weren't at the
17 hearing was because?

18 MR. EDMONDSON: At that time we didn't have listed
19 species or critical habitat.

20 MR. BAIOCCHI: That is correct.

21 So the new information is we now have spring-run
22 chinook salmon listed as threatened?

23 MR. EDMONDSON: That's correct. And the original
24 decision we feel didn't take into account the needs of
25 spring-run salmon or take in the needs of spring-run chinook

1 salmon.

2 MR. BAIOCCHI: We now have listed steelhead trout?

3 MR. EDMONDSON: That's correct.

4 MR. BAIOCCHI: And that occurred all after the 1992
5 hearing and is new information. It is my understanding
6 that, and I don't want to be testifying, that fall-run are
7 counted as species; is that true?

8 MR. EDMONDSON: Yes.

9 MR. BAIOCCHI: Consequently, a new player in the
10 decision making concerning the protection of listed species
11 is NMFS; isn't that correct?

12 MR. EDMONDSON: I would agree with that, yes.

13 MR. BAIOCCHI: I wonder if you could explain to me and
14 others here at this hearing the definition of "take" under
15 the federal Endangered Species Act, an example, Section 318.

16 H.O. BROWN: Mr. Lilly.

17 MR. LILLY: Yes. Mr. Brown, I object on the grounds of
18 relevance. The federal Endangered Species Act, in
19 particular the statutory definitions, have no bearing on the
20 action that this Board is going to take in this proceeding.
21 That will affect what federal agencies may do in the future,
22 not what this Board does under state law.

23 H.O. BROWN: Mr. Baiocchi.

24 MR. BAIOCCHI: I would disagree. First of all, based
25 on my -- and I do a lot of water rights with the State

1 Board. There is normally a provision that is put into the
2 order that they shall comply with the federal Endangered
3 Species Act. This is very pertinent because there is
4 testimony that is going to be presented here that shows that
5 ramping rates that were managed by Yuba County Water Agency
6 had adverse impacts on salmon. Salmon redds, as an
7 example.

8 What I want Mr. Edmondson to do is define what take is,
9 and that is part of the act. As we go through this thing I
10 just want to -- I think that is fair.

11 H.O. BROWN: Understand.

12 Mr. Minasian.

13 MR. MINASIAN: Objection. Calls for a legal conclusion
14 as well.

15 H.O. BROWN: With cross-examination we allow
16 considerable leeway to cross. I am going to allow the
17 question.

18 MR. BAIOCCHI: You are going to allow the question?

19 H.O. BROWN: Yes, I am going to allow the question.

20 Proceed.

21 MR. BAIOCCHI: Steve.

22 MR. EDMONDSON: Take means to harm, kill, harm, hunt,
23 pursue, collect or engage in those activities. I think that
24 is pretty close to the definition.

25 MR. BAIOCCHI: Thank you.

1 Isn't it true that the terms "harass" and "harm" have
2 been further defined by the regulations?

3 MR. EDMONDSON: Yes, specific regulations defining the
4 term "harm."

5 MR. BAIOCCHI: There is a also a provision in the
6 federal Endangered Species Act if you had a cooperating
7 water user, a habitat conservation plan that you could
8 develop in concert with that water user, a plan that would
9 protect a species; isn't that true?

10 MR. EDMONDSON: Are you saying that we could?

11 MR. BAIOCCHI: Yes. If you had a willing water user
12 that wanted to cooperate and work with NMFS; isn't that true?

13 MR. EDMONDSON: Right. The conservation plan would be
14 filed with National Marine Fisheries Service in support of a
15 Section 10 incidental take permit, incidental take can be
16 authorized from a private party by a habitat conservation
17 plan.

18 MR. BAIOCCHI: Generally speaking, why did NMFS list
19 spring-run chinook salmon?

20 MR. EDMONDSON: Spring-run chinook salmon were listed
21 because based on NMFS determination they were in danger of
22 becoming endangered or had a high probability of becoming
23 endangered in the near future.

24 MR. BAIOCCHI: Would the same be true of steelhead?

25 MR. EDMONDSON: Yes.

1 MR. BAIOCCHI: Now the Endangered Species Act of 1973
2 as amended provides for -- NMFS has an enforcement unit,
3 right?

4 MR. EDMONDSON: That's right.

5 MR. BAIOCCHI: And in the event that there is the
6 unauthorized taking of a listed species NMFS has the
7 availability of taking civil and criminal actions against
8 whoever might have done it; isn't that true?

9 MR. EDMONDSON: Correct. Any party that has taken a
10 listed species in violation of Section 9. So that includes
11 the listed or threatened species that has Section 9
12 protection.

13 MR. BAIOCCHI: Thank you very much.

14 And you have made recommendations to the Board
15 concerning -- an example we will go to the top under Exhibit
16 A on your exhibit, whatever it is so noted as, spring-run
17 chinook salmon spawning flows. It is your belief at the
18 present time that 700 is needed at the Marysville gauge; is
19 that correct?

20 MR. EDMONDSON: Correct. During the flow schedule
21 identified here.

22 MR. BAIOCCHI: Now, there is a modification and with
23 respect to spring-run, do spring-run spawn earlier than
24 fall-run?

25 MR. EDMONDSON: Yes.

1 MR. BAIOCCHI: What you are recommending is that the
2 flows for spawning be in September, right, second week of
3 September, to protect those fish that might be in the river
4 reach that's commenced spawning?

5 MR. EDMONDSON: Correct.

6 MR. BAIOCCHI: And what about this spring flows for
7 downstream migration, outward migration of chinook salmon
8 and steelhead? You indicated that additional studies are
9 needed, right, because you haven't got a position on it
10 right now?

11 MR. EDMONDSON: We have a position that it is
12 necessary. We don't know how much water is necessary to
13 facilitate the movement.

14 MR. BAIOCCHI: What you are saying is that you are
15 recommending to the Board that the Board recommend further
16 studies concerning pulse flows to get the little guys out of
17 the system?

18 MR. EDMONDSON: Right.

19 MR. BAIOCCHI: With respect to steelhead, now we have
20 adult fish, right, that might be migrating to the ocean in
21 conjunction with the juvenile fish?

22 MR. EDMONDSON: Repeat spawners, yes.

23 MR. BAIOCCHI: Thank you.

24 With respect to water temperatures, your
25 recommendations are in concurrence with Department of Fish

1 and Game?

2 MR. EDMONDSON: That's correct.

3 MR. BAIOCCHI: Very good.

4 And are you aware of flow fluctuations and flow
5 reductions that have had adverse impacts on chinook salmon
6 concerning the management of the river flows by Yuba County
7 Water Agency, are you aware of that?

8 MR. EDMONDSON: Yes, I am.

9 MR. BAIOCCHI: How do you feel about that? I mean,
10 there should be limitations?

11 MR. EDMONDSON: Yes.

12 MR. BAIOCCHI: Of course.

13 MR. EDMONDSON: The project should be managed in such a
14 way that it doesn't harm listed species.

15 MR. BAIOCCHI: If Yuba County Water Agency does that
16 again, okay, all right, says, "Well, the devil with NMFS, I
17 am doing it."

18 This is a hypothetical question. Can I ask it?

19 H.O. BROWN: Mr. Lilly.

20 MR. LILLY: To the extent that that question was
21 implying that the Yuba County Water Agency has done that, I
22 object on the ground that it assumes a fact not in evidence
23 and does not have a proper foundation.

24 H.O. BROWN: Do you have a response? But I am seeming
25 to agree with Mr. Lilly here. Rephrase the question, more

1 hypothetical.

2 MR. BAIOCCHI: I can leave out Yuba County Water
3 Agency.

4 H.O. BROWN: I think that would help.

5 MR. BAIOCCHI: In the event that, let's say, a water
6 user managed their flows without ramping rates and reduced
7 flows in such a manner as to dewater salmonid redds, would
8 your agency take actions against them under the federal
9 Endangered Species Act?

10 MR. EDMONDSON: My agency would initially take action
11 against the federal agency with discretionary authority over
12 the Yuba County's management of the water in releases. So
13 in the case I believe you are referring to, the rewind
14 operation, in that case we went to FERC initially. The
15 federal agency has a higher standard under ESA. First we go
16 to the federal agency. After that is exhausted we would go
17 to the private parties.

18 MR. BAIOCCHI: Thank you very much.

19 H.O. BROWN: Thank you, Mr. Baiocchi.

20 MR. BAIOCCHI: Thank you.

21 H.O. BROWN: Mr. Sanders.

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1 CROSS-EXAMINATION OF NATIONAL MARINE FISHERIES SERVICE

2 BY SOUTH YUBA RIVER CITIZENS LEAGUE

3 BY MR. SANDERS

4 MR. SANDERS: Good afternoon.

5 MR. EDMONDSON: Afternoon.

6 MR. SANDERS: You mentioned that critical habitat was
7 designated on February 16th. Was that February 16th of
8 2000, just this past week?

9 MR. EDMONDSON: Yes, sir.

10 MR. SANDERS: That was for salmon and steelhead on the
11 Lower Yuba River?

12 MR. EDMONDSON: That's correct.

13 MR. SANDERS: What was the exact designation on the
14 Lower Yuba River? What stretch of Yuba River is designated
15 for critical habitat for salmon and steelhead?

16 MR. EDMONDSON: From Englebright Dam downstream.

17 MR. SANDERS: Downstream to the confluence?

18 MR. EDMONDSON: Yes.

19 MR. SANDERS: You also mentioned both FERC -- let me go
20 back. You mentioned that FERC has initiated consultation
21 with NMFS on the Yuba River, correct?

22 MR. EDMONDSON: Right. Based upon the reserve
23 discretionary authority being a tacit federal action.

24 MR. SANDERS: What about the Corps, have they initiated
25 consultation yet?

1 MR. EDMONDSON: The Corps has not yet initiated
2 consultation. We have had discussions with the Corps and
3 have developed an agreement on the scope of the discussion.

4 MR. SANDERS: That's consultation under Section 7 of
5 the Endangered Species Act between federal agencies and
6 National Marine Fisheries; is that correct?

7 MR. EDMONDSON: Under 7(A)(2).

8 MR. SANDERS: What happens after consultation is over?

9 MR. EDMONDSON: Once consultation is initiated, it is
10 generally initiated with a biological assessment. The
11 biological assessment is presented to National Marine
12 Fisheries Service and we prepare a biological opinion with
13 attached incidental take statement, if incidental take is
14 necessary.

15 MR. SANDERS: So, NMFS at the end of the day issues a
16 biological opinion as to whether the federal agency actions
17 will endanger the species?

18 MR. EDMONDSON: Right. I think I see where you are
19 going. It is instant review of the action and would ensure
20 that the federal agency had taken all reasonable measures to
21 minimize the impact and determine on that unmitigatable
22 impact whether that would result in jeopardy to the
23 population.

24 MR. SANDERS: Does NMFS impose alternatives or
25 recommend different ways that the federal agency can do

1 their action consistent with ESA?

2 MR. EDMONDSON: Yes, sir. If NMFS analyses do not rise
3 to the level of jeopardy, National Marine Fisheries Service
4 could impose terms and conditions on the biological opinion.
5 Those would be terms and conditions, nondiscretionary terms
6 and conditions on the federal agency.

7 If the action rose to jeopardy, then NMFS would be able
8 to issue alternative actions, reasonable and prudent
9 alternatives.

10 MR. SANDERS: Let's assume that there is no jeopardy
11 for a moment. NMFS issues a no jeopardy biological opinion
12 and along with that an incidental take statement.

13 Maybe I should just ask quickly, what is the incidental
14 take statement?

15 MR. EDMONDSON: Authorization to take a listed
16 species.

17 H.O. BROWN: Mr. Minasian.

18 MR. MINASIAN: Could I ask for an offer of proof as to
19 the relevance of this? I think this is what we often do.
20 We are supposed to be here talking about how much water is
21 necessary for fish, and instead we might be concentrating on
22 common procedures.

23 H.O. BROWN: Mr. Sanders.

24 MR. SANDERS: Sorry. I am getting to how much water is
25 necessary to the fish, but it's -- this is the agency

1 responsible for implementing the federal Endangered Species
2 Act, which in this case has to do with how much water is
3 necessary for the fish. That is where I am going.

4 H.O. BROWN: Mr. Minasian.

5 MR. MINASIAN: This witness has begun his testimony by
6 saying, based upon the recommendations of the California
7 Department of Fish and Game, and in his direct he has not
8 indicated that he has independent knowledge or done any
9 experiments in regard to fishery.

10 So, a little bit of procedure is okay, but not for
11 background. We are going too far.

12 MR. EDMONDSON: Can I correct that? I didn't make that
13 statement.

14 H.O. BROWN: Wait a minute.

15 Mr. Sanders.

16 MR. SANDERS: Again, I am not really sure how to
17 respond to that, other than if you give me a little leeway I
18 will promise you we will get directly to how much flows are
19 necessary in the river under the Endangered Species Act and
20 under this witness' opinion, expert opinion.

21 H.O. BROWN: Mr. Sanders, I will give you little
22 leeway. Proceed.

23 MR. SANDERS: So if we have an incidental take
24 statement and a biological opinion, typically would NMFS
25 impose a flow regime as part of that?

1 MR. EDMONDSON: It is likely. As long as that flow
2 regime was within the minor change rule.

3 MR. SANDERS: So, regardless of what this Board
4 ultimately rules on what the minimum instream flows should
5 be, NMFS may, using their own discretion, impose a different
6 flow regime?

7 MR. EDMONDSON: Right. If new information is generated
8 through the Section 7 consultation that indicates additional
9 flows are necessary to further minimize take, then that may
10 occur, yes.

11 MR. SANDERS: Are you familiar with the flows being
12 recommended by Yuba County Water Agency's consultants?

13 MR. EDMONDSON: Only generally speaking. I just
14 perused those.

15 MR. SANDERS: Unfortunately, so did I. I could be
16 wrong on this, but I think that it was for -- I seem to
17 remember for a critical dry year, something like a hundred
18 cfs in the river during the summer and early fall. Does
19 that sound right to you? Unfortunately I don't have the
20 stuff with me.

21 MR. EDMONDSON: To the extent that that is less than
22 recommended under the PHABSIM modeling study, no, it doesn't
23 sound right.

24 MR. SANDERS: If they say recommended a flow of a
25 hundred cfs, I guess I am asking in your opinion would that

1 flow constitute take?

2 MR. EDMONDSON: In my opinion, having seen the river, I
3 would agree that that would probably constitute take.

4 MR. SANDERS: Likewise, I think for wet years they're
5 recommending a minimum flow of 250 cfs.

6 Again, in your opinion does that constitute take?

7 MR. MINASIAN: Objection. Where is the flow, 250?

8 H.O. BROWN: Mr. Sanders.

9 MR. SANDERS: Just forget the question since I don't
10 have the stuff in front of me. I'm just not going to go
11 there.

12 H.O. BROWN: All right.

13 MR. SANDERS: What happens if somebody violates the
14 Section 9 take prohibition?

15 MR. EDMONDSON: There is civil and criminal provisions
16 under Section 9 or penalty, and the penalty provisions are
17 contained in Section 11.

18 MR. SANDERS: Now, we were talking about Section 7
19 consultation. There is also Section 10, which applies to
20 private actions under ESA; is that correct?

21 MR. EDMONDSON: That's correct.

22 MR. SANDERS: If Yuba County Water Agency or one of the
23 districts applied under Section 10 for an incidental take
24 permit, would NMFS impose a flow regime as part of flow
25 procedure?

1 MR. EDMONDSON: NMFS would probably negotiate with the
2 private entity on a flow regime.

3 MR. SANDERS: Ultimately, though, would there be a flow
4 regime attached to that permit so that if, as a condition of
5 taking, would there be flows attached to that?

6 MR. EDMONDSON: There is likely NMFS would not accept a
7 habitat conservation for operation of a water management
8 project if it did not include a flow schedule.

9 MR. SANDERS: Again, that flow schedule would be
10 binding upon on the permittee regardless of what SWRCB says
11 in these hearings; is that correct?

12 MR. EDMONDSON: For the incidental take to remain in
13 effect, in other words, for authorization to remain in
14 effect, the private entity must adhere to terms of a habitat
15 conservation plan.

16 MR. SANDERS: Are you familiar with the fish diversion
17 and fish screen facilities on the Lower Yuba River?

18 MR. EDMONDSON: Yes, to the extent that there are any.

19 MR. SANDERS: NMFS has fish screen criteria?

20 MR. EDMONDSON: That's correct.

21 MR. SANDERS: Do any of the diversions meet those
22 criteria currently?

23 MR. EDMONDSON: My understanding is there is a new
24 facility at Browns Valley, and I think NMFS is looking at
25 that right now. I am not really sure the specifics of that.

1 Our engineering folks are taking a look at Browns Valley.

2 As far as at Daguerre Point Dam, there are two
3 diversions, South Yuba Brophy and the Hallwood-Cordua
4 diversion, and those do not meet NMFS criteria.

5 MR. SANDERS: If the diverter is diverting water
6 without meeting NMFS criteria, what happens under the ESA?

7 MR. EDMONDSON: Currently, nothing. There is a
8 proposed 4(d) rule for steelhead. Once the 4(d) rule takes
9 effect, at that point in time there would apply to Section 9
10 prohibitions to steelhead under the Section 9 violation.

11 MR. SANDERS: When is the 4(d) rule expected? Is there
12 a date on that?

13 MR. EDMONDSON: Yes, there is. It is due to be final
14 the middle of June of 2000.

15 MR. SANDERS: Middle of June 2000. So after June 2000,
16 it would be illegal to operate these diversions without
17 meeting NMFS fish screen criteria; is that correct?

18 MR. EDMONDSON: Middle of June 2000 or thereabouts.
19 There is generally a cooling off period before the
20 prohibitions become effective, 30, 60 days, something like
21 that.

22 MR. SANDERS: And after that these diversions are
23 illegal?

24 MR. EDMONDSON: That's correct.

25 MR. SANDERS: Would then the person be subject to some

1 kind of enforcement action by NMFS? Is that how it works?

2 MR. EDMONDSON: Yes, that is correct.

3 MR. SANDERS: If NMFS doesn't take enforcement action,
4 there is citizens provision under ESA?

5 MR. EDMONDSON: Yes.

6 MR. SANDERS: One way or another -- I am done.

7 Thank you.

8 H.O. BROWN: All right. Thank you, Mr. Sanders.

9 Mr. Cook.

10 ----oOo----

11 CROSS-EXAMINATION OF NATIONAL MARINE FISHERIES SERVICE

12 BY MR. COOK

13 MR. COOK: Was that Edmondson?

14 MR. EDMONDSON: Yes, sir.

15 MR. COOK: Mr. Edmondson, you apparently are familiar
16 with the Daguerre Point Dam diversions north and the south?

17 MR. EDMONDSON: Yes.

18 MR. COOK: On the south diversion are you familiar with
19 how it operates for the purpose of maintaining a level in
20 the canal, what I call the South Canal or Hallwood Canal?

21 MR. EDMONDSON: No, sir, not familiar with that
22 specifically.

23 MR. COOK: Are you familiar with a flashboard dam which
24 is a short distance downstream in this canal from the
25 Daguerre Point Dam?

1 MR. EDMONDSON: I heard mention of it.

2 MR. COOK: You are not personally familiar with that.
3 Are you familiar with the fact that water is diverted out of
4 the South Canal which then flows back into the river below
5 Daguerre Point Dam?

6 MR. EDMONDSON: No, I wasn't aware of that.

7 MR. COOK: Are you familiar with any salmon or
8 steelhead going into an area called Goldfields?

9 MR. EDMONDSON: Yes.

10 MR. COOK: Are you familiar with the fact that some
11 salmon, in fact, spawn above the South Canal and that the
12 young then outmigrate into the South Canal?

13 MR. EDMONDSON: Spawn above the South Canal, you mean
14 Yuba River?

15 MR. COOK: In the Goldfields. Within the Goldfields
16 area above or upstream of the South Canal are you familiar
17 with the fact that salmon or steelhead, in fact, spawn in
18 that area and that the young in outmigration have no other
19 course than to go into the South Canal?

20 MR. EDMONDSON: I wasn't aware that salmon, steelhead
21 spawned in the Goldfields and then make their way to the
22 South Canal.

23 MR. COOK: Assuming that that were true, would that
24 have an impact on your conclusions of when you consult with
25 the Corps and the other agencies?

1 MR. EDMONDSON: Yes. All impacts would fall into the
2 equation.

3 MR. COOK: Do you know if that is a matter of concern
4 for the ultimate consultation that you will have?

5 MR. EDMONDSON: There is -- I believe it would make
6 sense that it would. We haven't gone through the
7 consultation process yet. So we have to -- if you are
8 talking about a consultation with Corps of Engineers, the
9 Corps of Engineers or NMFS would have to make the argument
10 that Corps activities affected that impact. In other words,
11 that the Corps had some discretion over that impact.

12 MR. COOK: I am thinking of the Corps or other
13 activities within the Goldfields that have an impact on
14 salmon or their young outmigration. Would that be something
15 that you would consider in your consultation?

16 H.O. BROWN: Mr. Morris.

17 MR. MORRIS: Mr. Brown, we are going to object to this
18 line of questioning because it assumes facts that are not in
19 evidence.

20 H.O. BROWN: Mr. Cook.

21 MR. COOK: Well, as I understand it, just recently
22 there was a determination of habitat and that was in the
23 Goldfields area. I believe that in the '92 hearings it was
24 clearly established that there was water of the Yuba River
25 flowing through the Goldfields area which is an adjunct of

1 the river, and that the habitat would appear to me to be
2 something extremely vital in determining the impact of the
3 Endangered Species Act, to the extent that habitat has been
4 determined to be an issue.

5 H.O. BROWN: Mr. Frink, is there habitat established in
6 those Goldfields?

7 MR. FRINK: That is something I don't want to speculate
8 on. There was evidence of salmon being available on the
9 other side of the rock gabion fish screen, but those were
10 juvenile. I don't know if there is evidence that they spawn
11 in the Goldfields or not.

12 H.O. BROWN: Mr. Morris, I am going to go ahead and
13 allow the question with this caveat, that Mr. Frink just
14 brought into the consideration, that to his knowledge there
15 has not been established the fact that there is habitat.
16 And do you wish to add to that?

17 MR. MORRIS: I would only state there is information in
18 the record that there is NMFS' designation of critical
19 habitat in the Yuba River below the Daguerre Dam. And that
20 is the extent the question should go. There is nothing in
21 the record that says Goldfields is part of that, at least.

22 H.O. BROWN: Mr. Frink.

23 MR. FRINK: If you could ask the witness if he has any
24 knowledge of salmon spawning in the Goldfields, if he
25 doesn't then --

1 MR. COOK: I think he said he does not. And I think my
2 question was directed to the potential for the consultations
3 that are essential.

4 And relating to the habitat, if I may comment on the
5 1992 hearings?

6 H.O. BROWN: No. You're -- this is not your
7 opportunity to give testimony, you are here to ask questions
8 right now.

9 Mr. Baiocchi, you rise for an occasion?

10 MR. BAIOCCHI: No, my back.

11 MR. COOK: May I talk about the record of the '92?

12 H.O. BROWN: You may ask Mr. Edmondson if he has
13 knowledge of it, and we will try to get that on the record,
14 what his knowledge is. And then maybe others can testify to
15 the effect that you are searching for here, but ask him if
16 he has knowledge of it. Then direct your question to him.

17 MR. COOK: I could make, if proper, a proffer, an offer
18 of proof. We intend to have testimony to the effect that
19 there is spawning of salmon within the Goldfields that must
20 come through the South Canal operation, and that their young
21 must go back through the South Canal.

22 H.O. BROWN: You will have the opportunity, Mr. Cook,
23 to present your direct testimony. And at that time perhaps
24 that would be the better time.

25 MR. COOK: Very well. I am attempting to get --

1 H.O. BROWN: Will you, yourself, be presenting direct
2 testimony?

3 MR. COOK: Yes.

4 H.O. BROWN: You have not been sworn?

5 MR. COOK: No.

6 H.O. BROWN: Remind me of that so we don't forget that,
7 to swear you.

8 Please direct your questions to Mr. Edmondson.

9 MR. COOK: Very well.

10 I am not sure -- you are not familiar then, I think you
11 said, with the fact that salmon do spawn in the Goldfields?

12 MR. EDMONDSON: That is not correct. Your question was
13 whether they spawned in the Goldfields and whether their
14 progeny make their way into the South Yuba canal. And to
15 that extent, I don't know. There is evidence that chinook
16 may be spawning or that salmonids may be spawning in the
17 Goldfields because of the information from the gabion rock
18 weir. There was some juveniles captured behind the gabion
19 rock weir. I think the assumption was they probably made
20 their way -- they were probably spawned in the Goldfields
21 and made their way through the gabion rock weir rather than
22 coming up the diversion canal.

23 So it is my understanding there is some evidence that
24 there is some spawning in the Goldfields.

25 MR. COOK: You are not familiar then with the salmon in

1 this diversion canal?

2 MR. EDMONDSON: Which diversion canal?

3 MR. COOK: That is the one -- I am not sure. You just
4 testified there was a diversion canal, and I am assuming you
5 were talking about the one that goes out of the South Canal
6 a short distance away from Daguerre Point Dam.

7 MR. EDMONDSON: I was referring to there is some return
8 flow canals from the Goldfields.

9 MR. COOK: Yes. It returns back into the river from
10 the Goldfields?

11 MR. EDMONDSON: Right, right.

12 MR. COOK: Do you know that that comes from the South
13 Canal or at least in part?

14 MR. EDMONDSON: I didn't know the South Canal flowed
15 into those, any part of the Goldfields.

16 MR. COOK: Are you familiar with the fact that on
17 occasion that that water returning is at a different
18 temperature and different turbidity than the water that
19 comes from the Daguerre Point Dam?

20 MR. EDMONDSON: Yes.

21 MR. COOK: What is that familiarity?

22 MR. EDMONDSON: My understanding is that the water is
23 heated in the Goldfields and is warmer than the water moving
24 over the Daguerre Point Dam.

25 MR. COOK: What impact does that have on the salmon or

1 the steelhead?

2 MR. EDMONDSON: Because of the increase retention time,
3 particularly on a sunny day with high ambient temperature,
4 the temperature could rise above lethal temperatures for
5 salmonids. And that is part of the issue with the false
6 subtraction into the Goldfields.

7 MR. COOK: Are you familiar with any predation in that
8 return canal?

9 MR. EDMONDSON: In the return canal specifically, no.

10 MR. COOK: Then I guess I should ask the question of
11 your consultations, what you expect to consult about. Do
12 you expect to consult about this return canal during your
13 consultations?

14 MR. EDMONDSON: That hasn't been decided yet. That was
15 an issue brought up during our scoping meetings on the
16 consultation. We raised the issue that the Corps' activity
17 may be having an effect on just what you mentioned, the
18 return canal and the gold dredging operations. And we are
19 looking into that right now.

20 MR. COOK: Are you familiar with water traversing or
21 pouring over, across, the Daguerre Point Dam?

22 MR. EDMONDSON: Yes.

23 MR. COOK: Are you familiar with the water coming
24 through the fish ladders on both sides of that dam?

25 MR. EDMONDSON: Yes.

1 MR. COOK: Do you know of any method of measuring the
2 flow as it crosses Daguerre Point Dam?
3 MR. EDMONDSON: Over the top of the dam?
4 MR. COOK: Yes.
5 MR. EDMONDSON: How has that been measured?
6 You measure it by the length of the dam, coefficient
7 of roughness and the wetted area. So, essentially Q equals
8 velocity times area, corrected for the coefficient of
9 roughness.
10 MR. COOK: Do you know if measurements are taken using
11 that method?
12 MR. EDMONDSON: I am not aware on a continuous basis.
13 I know they have been. I don't know if they are
14 continuously measured.
15 MR. COOK: Do you know of a gauge at Daguerre Point Dam
16 for flow, a flow gauge?
17 MR. EDMONDSON: I am familiar with the locations of the
18 gauges besides Marysville and Englebright.
19 MR. COOK: Do you know where the Marysville gauge is in
20 relation to the Daguerre Point Dam?
21 MR. EDMONDSON: Downstream, yes.
22 MR. COOK: Do you know how far downstream?
23 MR. EDMONDSON: No, sir.
24 MR. COOK: Those are all the questions I have.
25 H.O. BROWN: Thank you, Mr. Cook.

1 Mr. Lilly.

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3 CROSS-EXAMINATION OF NATIONAL MARINE FISHERIES SERVICE

4 BY YUBA COUNTY WATER AGENCY

5 BY MR. LILLY

6 MR. LILLY: Good afternoon, Mr. Edmondson. I am Alan
7 Lilly for the Yuba County Water Agency.

8 First of all, Mr. Edmondson, just by way of background
9 regarding your qualifications, have you ever done any
10 professional fieldwork on the Yuba River?

11 MR. EDMONDSON: As a field biologist?

12 MR. LILLY: Yes.

13 MR. EDMONDSON: No, sir.

14 MR. LILLY: How many times have you been out to the
15 Yuba River?

16 MR. EDMONDSON: Actually on-site, once.

17 MR. LILLY: Which parts of the river did you visit when
18 you were on-site that one time?

19 MR. EDMONDSON: The Goldfields and Daguerre Point Dam.

20 MR. LILLY: Has anyone else from National Marine
21 Fisheries Service done any professional fieldwork on the
22 Yuba River?

23 MR. EDMONDSON: I know your engineering team has been
24 out there a few times, and we have done a flyover. Previous
25 to my coming on board we may have. I don't know. I can't

1 answer that question.

2 MR. LILLY: You are not aware of any fishery biology
3 work by National Marine Fisheries on the Yuba River itself?

4 MR. EDMONDSON: I am not going to say there hasn't
5 been, but I am not familiar with that.

6 MR. LILLY: Did you review in connection with your
7 preparation with your testimony for this hearing, did you
8 review any data regarding the relative distributions of the
9 steelhead or spring-run salmon in the different reaches of
10 the Lower Yuba River?

11 MR. EDMONDSON: No. To the extent that I reviewed data
12 on the distribution?

13 MR. LILLY: Yes.

14 MR. EDMONDSON: No, I did not.

15 MR. LILLY: Just following up on a question I just
16 heard. I believe in response to Mr. Cook, you mentioned
17 that some juveniles have been discovered behind the rock
18 gabion at the beginning of South Canal; is that correct?

19 MR. EDMONDSON: That is my understanding.

20 MR. LILLY: What is your understanding as to what the
21 source was of juveniles? In other words, where did their
22 parents spawn that led to the juveniles in that location?

23 MR. EDMONDSON: Again, this was part of a conversation
24 when I was at a site visit, coming back and talking to my
25 engineers.

1 salmon in the Yuba River as a federally
2 listed threatened species on September 16,
3 1999. (Reading.)

4 Do you see that?

5 MR. EDMONDSON: Yes, sir.

6 MR. LILLY: I just wanted to clarify, was the
7 evolutionary unit of spring-run that was listed on the Yuba
8 River or did it cover a broader geographical territory than
9 just the Yuba River?

10 MR. EDMONDSON: Central Valley spring-run chinook
11 salmon, included the Yuba River.

12 MR. LILLY: This listing population also included
13 several other Central Valley rivers?

14 MR. EDMONDSON: Yes. Most notably Butte Creek, Feather
15 River, Deer Creek, Mill Creek, small populations in Battle
16 Creek and Yuba River.

17 MR. LILLY: There is no special status for the run on
18 any one river within those rivers? They are all listed as
19 one evolutionary unit as a threatened species; is that
20 correct?

21 MR. EDMONDSON: Yes. Of those streams within that,
22 that ESU that contain nationally spawning populations of
23 spring-run.

24 MR. LILLY: Mr. Edmondson, you submitted Exhibits 2, 3,
25 4 and 9; I am trying to sort out the spring-run from the

1 steelhead. In your large package of exhibits I believe 2,
2 3, 4 and 9 were the exhibits that contained comprehensive
3 discussions of the causes of decline of spring-run; is that
4 correct?

5 MR. EDMONDSON: Two are factors contributing to
6 decline. Three is the west coast steelhead factor for
7 decline in port. Federal Register Notice listing spring-run
8 is 4. And 9 was the Notice of Proposed Critical Habitat.
9 Yes, all of those do list causes for decline.

10 MR. LILLY: Is it fair to say that those exhibits
11 contain a comprehensive discussion of the factors of decline
12 of spring-run?

13 MR. EDMONDSON: I would say that is an accurate
14 statement.

15 MR. LILLY: Do any of those exhibits contain any
16 references to the Yuba River project as a cause for the
17 decline of spring-run salmon?

18 MR. EDMONDSON: They don't mention the Yuba River
19 Project. They do mention the activities of the Yuba River
20 Project.

21 MR. LILLY: What -- can you tell me where they mention
22 any activities of the Yuba River Project?

23 MR. EDMONDSON: They talk about factors affecting
24 decline, including water availability or water quantity and
25 including stranding, desiccation of redds. So it does go

1 through the whole issue of water development and those
2 impacts.

3 MR. LILLY: Have you done any analysis to determine
4 whether or not the Yuba River Project has had any effect on
5 water availability in the Lower Yuba River?

6 MR. EDMONDSON: As that water availability is necessary
7 for listed salmonids, yes. I have not done a water calendar
8 study for water sales. For the salmon, yes.

9 MR. LILLY: That is not my question. Maybe my question
10 wasn't clear. Let me state it again.

11 Have you done any analysis as to whether or not flows
12 in the Lower Yuba River during the summer, which I
13 understand is one of the critical periods for these species,
14 are higher or lower as a result of the Lower Yuba River
15 Project?

16 MR. EDMONDSON: Yep, I have, as a matter of fact.

17 MR. LILLY: What was your analysis?

18 MR. EDMONDSON: That the New Bullards Bar Project, when
19 that was built, has increased flows in Lower Yuba River.

20 MR. LILLY: Have you done any analysis as to the New
21 Bullards Bar Project affect on water temperatures in the
22 Lower Yuba River?

23 MR. EDMONDSON: I have not. It is my understanding
24 they have reduced temperatures. It has reduced
25 temperatures.

1 MR. LILLY: Both an increase in summer flows and a
2 reduction in summer water temperature would be beneficial
3 for the spring-run salmon and steelhead; is that correct?

4 MR. EDMONDSON: That would depend on the duration of
5 those low temperatures and the duration of flow. Clearly a
6 high flow for a short period of time followed by a lower
7 flow would be no benefit at all. In fact, might be a
8 detriment.

9 MR. LILLY: On the other hand, if the flows had been
10 higher throughout the summer as a result of the project,
11 and water temperatures have been lower throughout the summer
12 as a result of the project, then the project would have
13 provided a net benefit to those species; is that correct?

14 MR. EDMONDSON: Theoretically to the extent that
15 habitat was improved over a long period of time to make that
16 habitat of use to the species, then, yes, it would have been
17 a benefit.

18 MR. LILLY: In regarding specific facilities, do you
19 agree that Englebright Dam was the facility that blocked the
20 access of spring-run chinook salmon to their historical
21 rearing habitat in the Yuba River system?

22 MR. EDMONDSON: Yes. That's included in some of the
23 exhibits that I placed in the record.

24 MR. LILLY: Who constructed Englebright Dam?

25 MR. EDMONDSON: The Corps of Engineers' project.

1 MR. LILLY: Now, if you can just go back to your
2 testimony, to Page 2, Paragraph 5, I just wanted to ask the
3 same clarifying question for steelhead. Your first sentence
4 says:

5 NMFS designated the Central Valley steelhead
6 in the Yuba River as a federally listed
7 species. (Reading.)

8 It is the threatened species on March 19th, 1998.
9 Again, that evolutionary unit actually includes more than
10 just the Yuba River, correct?

11 MR. EDMONDSON: That's correct.

12 MR. LILLY: Can you just tell us what rivers are
13 actually included within that unit? Maybe not list them
14 all, just the geographical description of the area.

15 MR. EDMONDSON: Generally the Central Valley rivers
16 which the two major rivers are the Sacramento and the San
17 Joaquin, Feather River, Stanislaus River, et cetera, the
18 major drainages and tributaries within the Central Valley.

19 MR. LILLY: I don't want to go through all your
20 exhibits because I don't have time; is it correct that your
21 Exhibits 5, 6, 7 and 8 contain a comprehensive discussion of
22 the causes of decline of the Central Valley steelhead?

23 MR. EDMONDSON: That's correct.

24 MR. LILLY: Do any of those exhibits contain a specific
25 reference to the Yuba River Project as a cause of the

1 decline of steelhead?

2 MR. EDMONDSON: Again, they don't mention Yuba River
3 Project specifically, but they describe impacts that have to
4 lead to decline of species and some of those impacts are
5 within the Yuba River and are caused by the Yuba River
6 Project.

7 MR. LILLY: Those would be the same type of impacts you
8 mentioned before, particularly changes in flows and changes
9 in water temperatures?

10 MR. EDMONDSON: Flow availability, changes in flow,
11 changes in water temperatures.

12 MR. LILLY: Do you happen to have Exhibit 5 handy? If
13 you don't, I will just get it for you.

14 MR. EDMONDSON: If you wouldn't mind.

15 MR. LILLY: I just have one question about this. If
16 you could turn to Page 145, Table 26 in this Exhibit
17 S-NMFS-5.

18 MR. EDMONDSON: Yes.

19 MR. LILLY: Specifically regarding the Yuba River, do
20 you agree with that estimate of steelhead run in the Yuba
21 River in 1984 at 2000 adults?

22 MR. EDMONDSON: Yes. My understanding is that that was
23 the best estimate at the time.

24 MR. LILLY: Do you have any information regarding the
25 changes in the annual runs of adult steelhead in the Lower

1 Yuba River since 1984?

2 MR. EDMONDSON: Nothing beyond anecdotal information,
3 if you are referring to information regarding population
4 increases or declines on population in the Lower Yuba River.

5 MR. LILLY: My question is, is there any quantitative
6 information regarding any substantial change in that 2000
7 annual run estimate?

8 MR. EDMONDSON: There may be. I haven't reviewed any
9 published reports.

10 MR. LILLY: You are not aware of whether that number
11 has changed?

12 MR. EDMONDSON: No. I would assume that if there is a
13 new population estimate it would be different than 2000.

14 MR. LILLY: You don't know whether it is higher or
15 lower, do you, or if there is a new population estimate?

16 MR. EDMONDSON: Not based on published reports. Based
17 on anecdotal information, but not published reports.

18 MR. LILLY: Just to clarify, there were a couple
19 questions just asked of you earlier regarding the take under
20 the federal Endangered Species Act. I just want to clarify,
21 have 4(d) rules been adopted for the steelhead and
22 spring-run salmon in the Lower Yuba River yet?

23 MR. EDMONDSON: They are not final yet.

24 MR. LILLY: Until they are final, there actually is no
25 legally enforceable federal take prohibition under federal

1 law; is that correct?

2 MR. EDMONDSON: No, that is not correct. There is a
3 requirement to consult by federal agencies. And although
4 there is not a specific violation of Section 9, there is a
5 violation of 72 and the agencies shall not implement actions
6 that result in potential jeopardy.

7 MR. LILLY: There is no enforceable take provision on
8 nonfederal agencies until 4(d) is adopted; is that correct?

9 MR. EDMONDSON: I think you are referring to Section
10 9. Section 9 does not take effect for those species, for
11 threatened species unless there is a 4(d) rule.

12 MR. LILLY: What you are referring to is Section 7
13 consultation; is that correct?

14 MR. EDMONDSON: Correct.

15 MR. LILLY: Just to go forward, do you have Exhibit 12
16 there handy?

17 MR. EDMONDSON: No.

18 MR. LILLY: Let me get it for you.

19 Exhibit 12 is the August 5th, 1999, letter from the
20 Federal Energy Regulatory Commission to National Marine
21 Fisheries Service?

22 MR. EDMONDSON: Correct.

23 MR. LILLY: On Page 4 of your testimony at Paragraph 10
24 you say:

25 By letter dated August 5th, 1999, FERC

1 requested a Section 7 consultation with NMFS
2 on impacts of the FERC license Yuba River
3 Project. (Reading.)

4 Then you list other projects. Does that Exhibit 12
5 actually contain any formal request from the Federal Energy
6 Regulatory Commission for Section 7 consultation?

7 MR. EDMONDSON: It does in the last paragraph on the
8 first page, refers to:

9 We, therefore, are designating these agencies
10 as the Commission is not federal
11 representatives for conducting
12 consultations.

13 (Reading.)

14 MR. LILLY: That is for consultations rather than a
15 specific request to FERC for a formal Section 7
16 consultation; is that correct?

17 MR. EDMONDSON: I took this to mean a tacit request or
18 consultation. At this point it is informal until we have a
19 biological assessment.

20 MR. LILLY: On your testimony on Page 6, I just want to
21 be clear, at the top of the page you're recommending that
22 the State Water Board adopt all the provisions of the 1996
23 Draft Decision, except for certain modification; is that
24 correct?

25 MR. EDMONDSON: With additional modifications,

1 correct.

2 MR. LILLY: So I believe you said it is your
3 understanding that the Draft Decision has a requirement of
4 700 cubic feet per second at Marysville during the spawning
5 period; is that correct?

6 MR. EDMONDSON: No. I want to change my recommendation
7 to 700 cfs at Marysville.

8 MR. LILLY: Was that to be consistent with the Draft?

9 MR. EDMONDSON: That was to be consistent with the
10 California Department of Fish and Game recommendation.

11 MR. LILLY: What is the technical basis for your
12 recommending this flow requirement start during the second
13 week of September?

14 MR. EDMONDSON: The spawning behavior of spring-run.

15 MR. LILLY: Is it that they may start spawning during
16 that period?

17 MR. EDMONDSON: That is based on information from
18 California Department of Fish and Game, based on their data.

19 MR. LILLY: This recommendation would be to optimize
20 the spring-run habitat, starting in the second week in
21 September?

22 MR. EDMONDSON: The recommendation would be optimize
23 their spawning habitat starting the second week of September.

24 MR. LILLY: Have you made any analysis to determine
25 whether or not the habitat is presently limited, is a

1 limiting factor for spring-run salmon?

2 MR. EDMONDSON: Under the current flow regime?

3 MR. LILLY: Whether it is under current conditions,
4 that is.

5 MR. EDMONDSON: Under the current flow regime whether
6 spawning habitat is limited to spring-run salmon; you are
7 asking me whether it is? I don't understand the question.

8 MR. LILLY: If the spring-run spawning habitat is less
9 than 700 cfs, is that a limiting factor that limits the
10 populations of spring-run salmon in the Lower Yuba River?

11 MR. EDMONDSON: Yes, it can be. And again, it goes to
12 the issue how long that habitat is available. For instance
13 if it is 700 cfs, for some action or lack of ramping, it
14 would be ramping -- for some reason that flow is dropped
15 immediately, it could desiccate redds. So the issue of
16 temperature associated with that flow. There is a
17 temperature associated flow, and that is part of the
18 habitat quality.

19 It is a complicated question and a complicated answer.

20 MR. LILLY: Let me state it a different way.

21 Do you have any technical information that would
22 indicate that a lower sustained flow would limit spring-run
23 salmon in the Lower Yuba River?

24 MR. EDMONDSON: Yes, the results of the PHABSIM
25 analysis.

1 MR. LILLY: Basically, you would follow the PHABSIM
2 analysis to determine the appropriate spawning habitat?

3 MR. EDMONDSON: That is the best available information
4 that I am aware of currently.

5 MR. LILLY: Did you or anyone else in National Marine
6 Fisheries do any analysis of the impacts that your proposed
7 flow recommendations would have on the Yuba County Water
8 Agency's ability to supply water to its customers?

9 MR. EDMONDSON: No. We are biologists, so we don't do
10 water accounting studies.

11 MR. LILLY: Does your proposal contain any reductions
12 in your recommended instream flow requirements for dry or
13 critical dry years?

14 MR. EDMONDSON: No.

15 MR. LILLY: Now I am going to go forward to your
16 proposed temperature standards, which I believe start on
17 Page 7 of your testimony.

18 H.O. BROWN: How much more time do you have, Mr. Lilly?

19 MR. LILLY: I have approximately five more minutes, and
20 I realize we are at about 20 minutes. There was some time
21 for him to find some exhibits. I think I will be within
22 the 20.

23 H.O. BROWN: How much more time?

24 MR. LILLY: About five more minutes.

25 H.O. BROWN: Continue.

1 MR. LILLY: Mr. Edmondson, what is the technical basis
2 for your proposed water temperature standards which are
3 listed at the top of Page 8 of your testimony?

4 MR. EDMONDSON: Those are the temperatures that are
5 within the optimal range. There is a range. There is no
6 one single number, but it is within the optimal range for
7 spring-run and steelhead.

8 MR. LILLY: Why does the recommendation for the 56
9 degrees at the Marysville gauge extend through June 30?

10 MR. EDMONDSON: Again, the necessity for the lifestages
11 in the river at that time, for spring-run and steelhead.

12 MR. LILLY: Basically there may still be some
13 incubating eggs in the river in June?

14 MR. EDMONDSON: Or juveniles.

15 MR. LILLY: Do you recommend adding these terms as
16 mandatory terms to the Yuba County Water Agency's water
17 rights permits?

18 MR. EDMONDSON: Yes, I believe I did.

19 MR. LILLY: Do you know what actions the Yuba County
20 Water Agency can take to control water temperatures in the
21 Lower Yuba River at Marysville?

22 MR. EDMONDSON: Currently the Yuba County Water Agency
23 can adjust the releases of flow from Englebright Dam, can
24 call for more releases from New Bullards Bar. And my
25 understanding from talking with Donn Wilson, he's recently

1 contracted a study to look at a, I think it's been termed, a
2 snorkel on the intake to draw from lower in the reservoir to
3 reduce temperatures.

4 MR. LILLY: Did you do any analysis to determine
5 whether or not with the present facilities available to the
6 Agency it is feasible to implement these proposed
7 temperature requirements?

8 MR. EDMONDSON: Whether or not -- I believe you are
9 asking whether or not there is a temperature modeling study
10 to say whether those temperatures would be available if
11 released for this period of time, and the answer is, no, we
12 did not.

13 MR. LILLY: Are you aware of National Marine Fisheries
14 making any temperature requirements for spring-run and
15 steelhead in the Lower American River?

16 MR. EDMONDSON: Are you referring to a biological
17 opinion that was recently issued?

18 MR. LILLY: Any recommendations by National Marine
19 Fisheries regarding temperature requirements in the Lower
20 American River.

21 MR. EDMONDSON: I am sure we have some. You have to be
22 more specific than that. We make lots of recommendations on
23 biological opinion issues.

24 MR. LILLY: What I want to know is, are you aware of
25 any National Marine Fisheries recommendations for specific

1 temperature requirements in the Lower American River during
2 the summer?

3 MR. EDMONDSON: I think there is recently a biological
4 opinion issued for OCAP.

5 MR. LILLY: Do you know how many degrees Fahrenheit are
6 the recommendations in that document?

7 MR. EDMONDSON: I didn't prepare that document; I
8 didn't have the date in front of me that was used to prepare
9 those recommendations, so I have no specific knowledge of
10 that.

11 MR. LILLY: Regarding your flow fluctuations criteria,
12 which are the Page 8 of your testimony, what periods of time
13 are you recommending that the Agency be prohibited from
14 making any reductions or fluctuations of flow? It says here
15 during salmonid incubation and spawning. I don't know what
16 time of the year you are talking about there.

17 MR. EDMONDSON: The spawning begins for salmonids
18 usually, according to the Cal Fish and Game data, by the
19 second week of September. I think that is general.
20 Sometimes a little earlier, sometimes a little later. I
21 think it is 30 to 40 days for spring-run soil in gravel
22 incubation. Steelhead, typically peak spawning occurs in
23 February, I believe. And there is 35 to 37. So somewhere
24 around between 35 and 40 incubation period for steelhead, as
25 well.

1 MR. LILLY: Basically, from the second week in
2 September through March or on into April?

3 MR. EDMONDSON: I would have to look on a calendar to
4 tell you how many days that was.

5 MR. LILLY: Is it approximately that time period?

6 MR. EDMONDSON: Yes.

7 MR. LILLY: Are you aware that sometimes flood flows
8 occur in the Lower Yuba River?

9 MR. EDMONDSON: Yes.

10 MR. LILLY: Are you aware that sometimes those can
11 exceed a hundred thousand cubic feet per second?

12 MR. EDMONDSON: I wouldn't be surprised.

13 MR. LILLY: What I don't understand from reading your
14 criteria are you proposing that if there is a flood flow of
15 a hundred thousand cubic feet per second that the Yuba
16 County Water Agency would be required to maintain that flow
17 throughout the remainder of the spawning and incubation
18 period?

19 MR. EDMONDSON: To the extent that the Yuba County
20 Water Agency has control over the flows, they should attempt
21 to minimize the fluctuations from differences in those
22 flows.

23 MR. LILLY: Then conversely, if the Agency does not
24 have control over those flows, they should not be required
25 to do that?

1 own investigation and critical analysis?

2 MR. EDMONDSON: It is based on both. Based on my
3 understanding, review of the record and Cal Fish and
4 recommendations.

5 MR. MINASIAN: What records have you examined?

6 MR. EDMONDSON: We reexamined the PHABSIM study that
7 was conducted, IFIM analysis, reviewed some of the testimony
8 that was presented, and I reviewed some of the biological
9 information that has been cited in our status reviews and
10 the listing documents.

11 MR. MINASIAN: Did you look at the 1991 recommended
12 Department of Fish and Game regimen for flows in the river?

13 MR. EDMONDSON: I am aware of that.

14 MR. MINASIAN: When you say you looked at the IFIM
15 study, are you referring to the work that was done by, is
16 it, Beak & Associates?

17 MR. EDMONDSON: Yes. I believe so.

18 MR. MINASIAN: Are you aware that the flows that are
19 proposed to the proposed decision basically minimize certain
20 times of the year the usable wetted area of the river?

21 MR. EDMONDSON: No. You are talking about the Beak?

22 MR. MINASIAN: Yes, Beak analysis.

23 MR. EDMONDSON: Also the Beak analysis. The PHABSIM
24 Study results recommended minimizing the wetted area.

25 MR. MINASIAN: No, that the flows recommended by the

1 Department of Fish and Game and incorporated within the
2 proposed decision basically conflicts with the recommended
3 usable wetted area that Beak came up with.

4 MR. EDMONDSON: I am going to ask you to restate your
5 question. There is the Beak, PHABSIM analysis, Cal Fish and
6 Game's earlier recommendations and not the latest
7 recommendation. And you are saying the earlier
8 recommendation?

9 MR. MINASIAN: The 1991 study was based upon the Beak
10 Study; do you remember that?

11 MR. EDMONDSON: Right. And you're talking about Cal
12 Fish and Game's original recommendations that they made at
13 the 1992 hearings?

14 MR. MINASIAN: That is good.

15 MR. EDMONDSON: Were for flows that are less than the
16 current recommendation and NMFS' current recommendation?

17 And it is my understanding that those recommendations
18 didn't take into account the needs of spring-run because
19 they weren't listed at that time.

20 Does that answer your question?

21 MR. MINASIAN: Let me ask it in a different way. We
22 always have to make compromises between maximizing the area
23 that would be available to juveniles and for incubation and
24 maintaining temperatures of water during the growing cycle
25 of the juvenile or fry, don't we?

1 MR. EDMONDSON: We don't always have to. In some
2 situations where we are limited by cold pool storage or
3 limited by available storage, that happens.

4 MR. MINASIAN: Do you believe we have limitation on
5 this river that should be reflected in our decisions in
6 regard to fluctuations in temperature?

7 MR. EDMONDSON: I am not aware that there are
8 limitations in our ability to minimize fluctuations in
9 temperature.

10 MR. MINASIAN: You began your testimony in this matter,
11 I believe, by indicating what the main source of your
12 information was. And if I could put part of it on.

13 Right at the top do you see the phrase "based upon the
14 recommendations from California Department of Fish and Game"?

15 MR. EDMONDSON: Yes.

16 MR. MINASIAN: You recommend.

17 Did you do any critical analysis of the recommendations
18 of California Department of Fish and Game?

19 MR. EDMONDSON: Yes. If you look through the
20 documents that I added to the record as evidence in my
21 various exhibits, a lot of the -- almost all of the
22 site-specific citations are Cal Fish and Game data. For
23 instance, McKuen is cited numerous times and Nelson is
24 cited, et cetera. That is the agency with state authority
25 over those species, the agency that has most of the field

1 data. So that is why I based it on California Department of
2 Fish and Game recommendation as having the best available
3 information. MR. MINASIAN: Yet, on the very next
4 page you recommend that we not establish a flow regime that
5 is rigid for the period of April 1 through June 30th and
6 instead experiment for ten years.

7 Why is that?

8 MR. EDMONDSON: I didn't believe there was enough data.
9 For instance, there was no specific study on flows for
10 juvenile emigration. And also in the past there has been a
11 great deal of success with the use of pulse flows as a water
12 saving measure. There are certain instances where pulse
13 flows can be used rather than sustained flows and have the
14 same efficacy of downstream transport while saving water.

15 I think I even mention as a potential water savings.

16 MR. MINASIAN: Did you see anything about using pulse
17 flows on the Yuba River in the current testimony filed by
18 the Department of Fish and Game?

19 MR. EDMONDSON: There is no study done on downstream
20 emigration flows.

21 MR. MINASIAN: Between 1992 and 2000 we have learned a
22 great deal about pulse flows as a result of work on the
23 Stanislaus and San Joaquin River, have we not?

24 MR. EDMONDSON: In other rivers, yes.

25 MR. MINASIAN: We have learned that, just as in nature,

1 maintaining a rigid flow and a rigid temperature for a long
2 period of time can actually be disadvantageous to the
3 survival of juveniles, haven't we?

4 MR. EDMONDSON: Well, again, that depends on what that
5 flow is and what the temperature is and for what period of
6 time. It can be also advantageous for salmonids.

7 MR. MINASIAN: You do understand that after eight years
8 Department of Fish and Game is still recommending a fixed
9 flow at various levels, whether it is dry or wet, for
10 30-day, 60-day, 90-day periods, do you not?

11 MR. EDMONDSON: Yes, they are. And that is based in
12 large part on results of the PHABSIM modeling study.

13 MR. MINASIAN: You don't agree with that, do you?

14 MR. EDMONDSON: I do agree with that. I don't agree
15 that there is sufficient data to adequately quantify the
16 necessary flow for downstream emigration. There is a flow
17 that is necessary to maximize downstream emigration. I
18 don't know what it is. I don't believe we have information
19 available to determine what that flow is today.

20 MR. MINASIAN: Now, so that I understand how much of
21 the DFG recommendation you adopt and what you base it upon,
22 can you envision a scenario in which the water would be kept
23 so cold that the growth rates of juveniles would not
24 accelerate enough that when, in fact, they started to
25 outmigrate they all die before they got through the Bay?

1 MR. EDMONDSON: If you are asking is there a lower
2 lethal temperature for juveniles or other lifestages, the
3 answer is yes. I think for chinook it is somewhere around
4 34 degrees.

5 MR. MINASIAN: What I am asking you is, if we keep the
6 water at the temperature that you've recommended in the
7 Daguerre Point Dam area at 56 degrees year-round, do you
8 agree that that will retard the growth rate and period
9 within which they will elect to outmigrate?

10 MR. EDMONDSON: Retard based on what? Based on actual
11 conditions?

12 MR. MINASIAN: Yes. The colder temperature slows down
13 the growth rate, doesn't it?

14 MR. EDMONDSON: Right. The fish are adapted to those
15 temperatures within that range. In fact, my personal
16 opinion is that the 56 degree value is a little high. It
17 could actually be a couple degrees lower. That is part of a
18 reasonableness consideration for the 56 degrees.

19 MR. MINASIAN: What is your basis for that on the Yuba
20 River?

21 MR. EDMONDSON: 19-, I think it was, -87 study done by
22 Rich. I believe '87. And identified 54 degrees as the
23 upper optimum temperature for spawning and incubation.

24 MR. MINASIAN: Do you know what particular area of
25 California that study was done in?

1 MR. EDMONDSON: I read so many last night, late in the
2 hours, I don't know all the details.

3 MR. MINASIAN: Are you aware that that study was
4 preceded by a study of Hallock that basically indicated that
5 there were beneficial effects for warming water to the
6 degrees of 58 to 60 when certain lifestages were reached?

7 MR. EDMONDSON: I have heard of that study. And when I
8 first heard about the study of those temperature levels, I
9 didn't believe it. Those are -- based on my opinion and my
10 experience those values are ludicrous. They are higher
11 than the fish are adapted for, and based on field studies
12 those temperatures are within the lethal range. From about
13 50 degrees on we have documentation of mortality to chinook,
14 particularly spawning and ingravel forms.

15 MR. MINASIAN: Let's look at the Yuba River as a
16 laboratory. Before Bullards Bar we had Englebright, didn't
17 we?

18 MR. EDMONDSON: Right.

19 MR. MINASIAN: Englebright had an affect of warming the
20 water, did it not?

21 MR. EDMONDSON: That is my understanding. Once it
22 filled in with gravel particularly.

23 MR. MINASIAN: The populations of returning adults and
24 populations of outmigrating juveniles have actually fared
25 very well on the Yuba River compared to other places in

1 California, haven't they?

2 MR. EDMONDSON: I would not say on the record that the
3 populations of salmonids have fared well on the Yuba River.

4 MR. MINASIAN: Do you have a professional opinion as to
5 whether or not there has been any affect at all as a result
6 of Bullards Bar upon the abundance of juveniles and
7 returning adults?

8 MR. EDMONDSON: I have heard anecdotal information. I
9 haven't seen published reports yet. The anecdotal
10 information indicates that the lower temperatures and water
11 flows may have been beneficial.

12 MR. MINASIAN: You know those have been provided by
13 Bullards Bar, don't you?

14 MR. EDMONDSON: Yes, in fact, we did an analysis on the
15 difference in flows since Bullards Bar was constructed.

16 MR. MINASIAN: What I want to know is, why didn't all
17 the juveniles die as a result of the warming effect of
18 Englebright if juveniles need a colder temperature than 56
19 degrees?

20 MR. EDMONDSON: Why did not all the juveniles die? So
21 you are assuming that Englebright raised the water
22 temperature above the upper lethal temperatures for
23 juveniles.

24 MR. MINASIAN: Have you looked at the testimony filed
25 by Cordua Irrigation District in regard to the historic

1 temperatures in April, May, June, July before Bullards Bar?

2 MR. EDMONDSON: No, I have not.

3 MR. MINASIAN: Thank you.

4 I should ask you, do you have any source of information
5 to tell you what the historical profiles of temperatures at
6 Daguerre Point Dam were before Bullards Bar?

7 MR. EDMONDSON: No, I haven't looked at that.

8 MR. MINASIAN: Would you look at the underlined
9 language at the top. If I see this right, you want at least
10 56 degrees maintained on a year-round basis at Daguerre
11 Point; is that correct?

12 MR. EDMONDSON: Yes.

13 MR. MINASIAN: You want 56 degrees in the period of
14 October 1 to June 30th maintained at Marysville?

15 MR. EDMONDSON: Correct.

16 MR. MINASIAN: Why does the temperature need to be
17 that cold during the period of October 1 through June 30th
18 at Marysville?

19 MR. EDMONDSON: Because we've got the spawning
20 salmonids, juveniles and ingravel forms during that period.

21 MR. MINASIAN: What percentage of juveniles are
22 ingravel form below Daguerre Point?

23 MR. EDMONDSON: What percentage?

24 MR. MINASIAN: Yes.

25 MR. EDMONDSON: Percentage relative to what?

1 MR. MINASIAN: To the total population.

2 MR. EDMONDSON: In ESU?

3 MR. MINASIAN: Yes. Well, let's take salmonids and
4 let's look at the overall population.

5 Isn't it true that most of them are being successfully
6 reared above Daguerre Point?

7 MR. EDMONDSON: Most of the salmonids in the Yuba River
8 spawn above Daguerre Point Dam?

9 MR. MINASIAN: And are reared above Daguerre Point.

10 MR. EDMONDSON: It could be. I wasn't aware of that.

11 MR. MINASIAN: Do you have any information as to what
12 the ratio is?

13 MR. EDMONDSON: No, I don't.

14 MR. MINASIAN: When you try to maintain 56 degrees at
15 Marysville, that necessarily means in June at least you are
16 going to have to maintain a colder temperature at Daguerre,
17 doesn't it?

18 MR. EDMONDSON: It is more than likely that the water
19 would pick up some temperature, yes.

20 MR. MINASIAN: So, do you know what the average spread
21 is in the months of April, May and June of a typical year
22 between Daguerre and Marysville?

23 MR. EDMONDSON: No, I do not.

24 MR. MINASIAN: Are you aware that one of the purposes
25 of pulse flows is to cause the juveniles to outmigrate at a

1 time in which the temperatures in the Sacramento River and
2 the Delta conditions are such that survival is most likely?

3 MR. EDMONDSON: That is one of the purposes of pulse
4 flows.

5 MR. MINASIAN: Is one of the techniques of pulse flow
6 not only quantity of water, but temperature? You warm the
7 temperature up so the salmonids mature faster, get stronger
8 and are better able to survive?

9 MR. EDMONDSON: I have heard that mentioned, and I have
10 been involved with some pulse flow projects at my time with
11 FERC, but I have not seen one where there was control of the
12 temperature during the pulse flow. It is just release of
13 specific volumes of water. But I have heard that
14 mentioned, that temperature can also be used, but I am not
15 aware that temperatures have been used in a pulse flow
16 regime for juvenile migration in a natural system.

17 MR. MINASIAN: Where did you do your work regarding
18 pulse flows?

19 MR. EDMONDSON: I did -- most of the work I have done
20 with pulse flows have been with the National Marine
21 Fisheries Services, Federal Energy Regulatory Commission,
22 and to a lesser extent with the Bureau of Reclamation.

23 MR. MINASIAN: Have you ever worked in research in
24 terms of appraising the data gathered and preparing the
25 methodology of the study?

1 MR. EDMONDSON: Yes. When I worked for the Federal
2 Energy Regulatory Commission I required studies on pulse
3 flow. I directed the studies, reviewed the data and then
4 prepared Commission orders, setting standards for pulse
5 flows.

6 MR. MINASIAN: Is there any study or treatise which
7 indicates that pulse flows alone, without bringing the
8 juveniles up to a maturity stage by raising temperatures,
9 will work; that is, isn't it always flow plus temperature to
10 make juvenile salmonids go out?

11 MR. EDMONDSON: As I said before, I am not aware.
12 There may be particular projects that release pulse flows of
13 a warmer temperature. I've never seen any of those.
14 Generally, it is release of quantity of water only. You
15 wouldn't make sense if the purpose is to facilitate
16 downstream migration of juveniles to do that at a time when
17 the juveniles weren't ready to migrate.

18 MR. MINASIAN: How would we get them ready to migrate
19 with a temperature of, say, two degrees less than 56 at
20 Daguerre from October 1 to June 30?

21 MR. EDMONDSON: At 54 degrees at Daguerre?

22 MR. MINASIAN: Yes.

23 MR. EDMONDSON: Generally, that is the temperature that
24 is considered optimum for juveniles, for the spawning adults
25 ingravel forms and for the juveniles, about 54 degrees C.

1 That is what the fish are adapted to.

2 MR. MINASIAN: But the spawning adults and the
3 juveniles are spawning in September, October, November, are
4 they not? We are talking about the rearing stage, aren't we?

5 MR. EDMONDSON: Right, correct.

6 MR. MINASIAN: Do you have any authority that cold
7 temperatures like that are necessary in the rearing stage or
8 even productive in terms of causing maturation of the
9 juveniles?

10 MR. EDMONDSON: That is within the range that is
11 considered preferable, preferable range for chinook salmon
12 juveniles, within that range.

13 MR. MINASIAN: If the Board stopped the hearing right
14 now and took your testimony and followed your
15 recommendations, it would not order any particular rigid
16 flow in the months of April, May, June, would it?

17 MR. EDMONDSON: I am sorry, could you restate that? I
18 don't understand.

19 MR. MINASIAN: If the Board stopped this hearing and
20 accepted your expert testimony, it would not adopt a rigid
21 flow structure for the months of April, May and June, would
22 it?

23 MR. EDMONDSON: I believe I recommended a study of
24 flows. So, it would be, but it wouldn't be -- those flows
25 would vary over a ten-year period. For one year it may be

1 800 or for two or three years 1500, 2000; and included in
2 there a study of pulse flows. So there would be rigid flow
3 over that period of time.

4 MR. MINASIAN: Isn't current pulse flow technology that
5 you look at the maturity level of the juveniles, you look at
6 the state of population? You look at whether they were
7 washed out by a big flood, and you determine the flow level
8 and the timing of pulse on the basis of all current
9 conditions?

10 MR. EDMONDSON: You want to time the pulse when the
11 juveniles are ready to outmigrate. That's correct.

12 MR. MINASIAN: In the last eight years haven't we
13 learned that the whole methodology proposed in the 1991
14 Department of Fish and Game study is antiquated, that we
15 need real-time monitoring and operation of water
16 temperature, water flow and the maturity level of the
17 juveniles?

18 MR. EDMONDSON: I am going to restate what I think you
19 asked me. If you asked me if I still hold that my
20 recommendation for a study of emigration flows because we
21 don't have adequate information at this time to set a
22 specific or explicit value for those flows, then the answer
23 is, yes, I still agree with that recommendation.

24 MR. MINASIAN: Yet you think that if for ten years we
25 sent down 700 one month and 800 another and the 900, and

1 then we got a different water year next year and we sent
2 down 1200 or 1000, somehow we'd learned something from that?

3 MR. EDMONDSON: That was the reason for the ten-year
4 period of record.

5 MR. MINASIAN: What would we do during the ten years to
6 really make sure that we had control of all the variables?

7 MR. EDMONDSON: And, again, are you asking me to
8 construct a pulse flow study right now?

9 MR. MINASIAN: The Board just ended the hearing.
10 They've got to accept your testimony. What do you want them
11 to do?

12 MR. EDMONDSON: During that flow period, release flows
13 from April 1 to June 30, during which time 800, 1500, 2000
14 cfs could be studied to facilitate downstream smolt
15 movement. Migration rates of alternative flows, efficacy
16 and potential water savings of pulse flows and temporal
17 variation of downstream movement should be investigated. I
18 am not sure what else you asked me.

19 MR. MINASIAN: You didn't mention that you wanted the
20 alteration of flows to also depend on the maturity rate of
21 the juveniles. Should that be part of the program?

22 MR. EDMONDSON: If pulse flows are used specifically,
23 it should. If pulse flows are not used, then that is not as
24 important. Because there is a range with pulse flows, there
25 is still a range in outmigration that tends to follow a

1 steep bell curve.

2 During that period, if there were no pulse flows, you'd
3 probably want to release the same flows during the period of
4 outmigration. If you were to use pulse flows, however,
5 you'd want to make sure you time that to when the majority
6 of the juveniles were ready to move downstream.

7 MR. MINASIAN: In 1992 when we were talking about
8 maintaining rigid flows for 30-day periods, we didn't have
9 the information that pulse flows now show that the
10 juveniles, if they are ready to go and mature enough and the
11 water is warm enough, they go out in a matter of days after
12 the pulse flow, don't we? That is something we have learned
13 in the last eight years, isn't it?

14 MR. EDMONDSON: That pulse flows work in some
15 situations, the answer is correct. But it depends on a
16 number of things. For instance, turbidity, a day and night
17 difference. There are other factors that weigh into whether
18 pulse flows are effective or not. In one river system it
19 may be, and in another sometimes it is not.

20 MR. MINASIAN: Based upon your experience, if we finish
21 this hearing today, what should the Board order in regard to
22 the factors to vary year by year in regard to which flow to
23 pick and what time to send the pulse?

24 MR. EDMONDSON: I go back to my recommendation under
25 B. Spring flows for downstream emigration, what I

1 previously read.

2 MR. MINASIAN: You do mean that they should study the
3 size of the fish, whether the population has already been
4 washed out by flood? They should take those things into
5 consideration, shouldn't they?

6 MR. EDMONDSON: As background information I assume they
7 would have that information available. Some of the
8 information is not as pertinent if they are not looking
9 specifically at pulse flows. It may be that in this river
10 system that pulse flows are not efficacious for moving
11 downstream migrants. It may be that -- and, again, there is
12 paucity of information here, and that is why I suggested a
13 study. We don't know if they mature almost simultaneously
14 or if it is a full range of that period that we have
15 maturation. So essentially we have a lack of a sharp bell
16 curve that I mentioned before. And sometimes that is the
17 case, we have more gradual maturing and emigration during a
18 certain period. And I don't think we have that information
19 available on the Yuba River, and that is why I suggested a
20 study.

21 MR. MINASIAN: The Mitchell study, based upon the 1992
22 results, shows that exact bell curve, doesn't it?

23 MR. EDMONDSON: Again, one of the reasons I recommended
24 a ten-year period of study, I am not sure. Because some of
25 the things you brought up, there is so much variation from

1 one year to another. I would recommend a longer period of
2 study than a single event.

3 MR. MINASIAN: Throw myself on the mercy of the Chair
4 or Mr. Gallery, and ask if I could borrow just ten more
5 minutes to deal with this gabion problem.

6 MR. GALLERY: I have no questions, so Mr. Minasian can
7 have my time.

8 H.O. BROWN: That is very generous of you, Mr. Gallery.
9 We don't do it that way.

10 Mr. Minasian, your questions are very pertinent and I
11 am interested in hearing them, so continue another ten
12 minutes.

13 MR. MINASIAN: Thank you.

14 Steven van Gogh, I am not.

15 Remember Mr. Cook's examination of you, and you used
16 the word gabion? Do you remember you also testified that
17 the fish protection device, the gabion at the South Yuba
18 Water District and the Brophy Water District didn't meet
19 NMFS standards?

20 MR. EDMONDSON: Correct.

21 MR. MINASIAN: There is a drawing on the overhead. The
22 green represents the Yuba River? Do you see the label
23 gabion?

24 MR. EDMONDSON: Yes.

25 MR. MINASIAN: Did you go on the tour?

1 MR. EDMONDSON: The recent tour?

2 MR. MINASIAN: Yes.

3 MR. EDMONDSON: No.

4 MR. MINASIAN: Have you ever seen the gabion of South
5 Yuba-Brophy?

6 MR. EDMONDSON: Yes.

7 MR. MINASIAN: Does that drawing, obviously not to
8 scale, look like the approximate dimensions of the gabion,
9 the placement of the gabion?

10 MR. EDMONDSON: Perhaps. Fairly rough sketch.

11 MR. MINASIAN: Let me ask you a few other questions.
12 Mr. Cook was referring to the South Canal. Now, the gabion
13 is positioned in a pond, is it not, off of the Yuba River?

14 MR. EDMONDSON: Right. What I saw was in a pond in the
15 Goldfields.

16 MR. MINASIAN: There is no way adult salmon could swim
17 the rock of the gabion and spawn in the pond between gabion
18 and the levee, is there?

19 MR. EDMONDSON: There is no way an adult salmon could
20 swim through the gabion, but an adult salmon could swim over
21 the gabion during overtopping.

22 MR. MINASIAN: Because floods occur in December,
23 January, February, March, usually, don't they?

24 MR. EDMONDSON: Yes.

25 MR. MINASIAN: You know of any adult salmon that will

1 be in the Daguerre Point area during the time of a flood
2 that could swim over the top of the gabion?

3 MR. EDMONDSON: Do I have specific evidence of that?
4 No, I don't. I can construct a scenario where that might
5 happen. Is that what you are asking me to do?

6 MR. MINASIAN: Well, I just want to be real clear what
7 you are talking about. You are not saying that the gabion
8 is allowing adult fish to go through it, are you?

9 MR. EDMONDSON: The gabion may be allowing adult fish
10 to go over the top of it during overflows.

11 MR. MINASIAN: You don't have any evidence of that, do
12 you?

13 MR. EDMONDSON: No. The evidence that I had was that
14 there were juveniles found on both sides of the gabion.
15 Therefore, the gabion was ineffective in keeping salmon out
16 of that area.

17 MR. MINASIAN: Have you read any reports in regard to
18 the monitoring and the effectiveness of the gabion or just
19 been told that?

20 MR. EDMONDSON: I have been told that by NMFS staff and
21 by Cal Fish and Game staff.

22 MR. MINASIAN: But you haven't seen any studies that
23 would indicate that?

24 MR. EDMONDSON: If there is one available, again, with
25 the pile of things I read last night, that wasn't included

1 in there.

2 MR. MINASIAN: You actually started to prepare for this
3 testimony, I gather, last night in terms of looking at the
4 background material; is that correct?

5 MR. EDMONDSON: No. Actually, I initiated consultation
6 with FERC back in May and with the -- actually, I have to
7 look back on the dates, but I started work on the Yuba River
8 before we initiated consultation with the Corps of
9 Engineers. I became part of the Yuba River, Lower Yuba
10 River Fisheries TAC group and attended those meetings and
11 part of the Upper Yuba River Studies Technical Advisory
12 Group. I have been working on the Yuba River previous and
13 most of the information that I have is from those other
14 proceedings.

15 MR. MINASIAN: Now, when Mr. Cook referred to the South
16 Canal, what did you think he was meaning in relationship to
17 the gabion and the pond on the river side or the pond on the
18 land side or levee side of the gabion?

19 MR. EDMONDSON: I am not familiar with the location of
20 South Canal relative to that gabion, so I can't answer your
21 question.

22 MR. MINASIAN: Did you -- do you understand today what
23 way the Brophy-South Yuba-Yuba County Water Agency-Dry Creek
24 gabion does not meet reasonable standards for protection of
25 juvenile fish?

1 MR. EDMONDSON: Again, my understanding based on NMFS
2 staff and Cal Fish and Game staff is juveniles were sampled
3 on both sides of the gabion. Therefore, the gab did not
4 meet criteria.

5 MR. MINASIAN: Well, they would be sampled on the river
6 side, wouldn't they, because that is where juveniles are
7 supposed to stay, isn't it.

8 MR. EDMONDSON: My understanding is they were sampled
9 on both sides of the river.

10 MR. MINASIAN: Is that NMFS' standard, basically, that
11 a structure is supposed to keep the juveniles from going
12 through it into the water diversion facilities?

13 MR. EDMONDSON: The juveniles and the adults.

14 MR. MINASIAN: Today if I told you that the only report
15 that exists which would indicate that there were any
16 juveniles on the land side of that gabion attributes that to
17 overtopping during flood conditions, would you say that that
18 doesn't meet NMFS' standards?

19 MR. EDMONDSON: If you are saying that fish make it
20 over the fish barrier, then I would say that fish barrier
21 does not meet NMFS' standards.

22 MR. MINASIAN: The fish during flood time wash into the
23 pond all along the Yuba River, don't they?

24 MR. EDMONDSON: Yes, it occurs.

25 MR. MINASIAN: So, every pond along the Yuba River that

1 juveniles are washed into doesn't meet NMFS' standards; is
2 that right?

3 MR. EDMONDSON: There is no specific screen. A screen
4 or fish barrier -- the gabion rock weir as a fish barrier
5 does not mean NMFS screen criteria.

6 MR. MINASIAN: Just so that we can understand the
7 position of NMFS, we just ended this hearing. What do you
8 want to happen at the gabion?

9 MR. EDMONDSON: If the gabion is ineffective excluding
10 fish, then it needs to be made effective.

11 MR. MINASIAN: That means we raise it up, keep the
12 floods out; is that right?

13 MR. EDMONDSON: Perhaps. There may be other avenues.

14 MR. MINASIAN: What do you want this Board to do in
15 regard to the gabion?

16 MR. EDMONDSON: I want the -- well, what I want, what I
17 think should happen is that the Board should require that
18 the gabion be constructed in such a way that precludes
19 fish.

20 MR. MINASIAN: If the evidence shows that it does
21 preclude fish, National Marine Fisheries Service will not
22 make the statement that it doesn't mean NMFS' standards; is
23 that the corollary?

24 MR. EDMONDSON: There is a criteria for screens.

25 MR. MINASIAN: That is a metal screen with a certain

1 size opening with an electrical source and cleaning
2 mechanism, isn't it?

3 MR. EDMONDSON: The criteria doesn't actually go to the
4 cleaning mechanism. It is more general. The screen has to
5 be able to maintain a certain efficiency, and often to do
6 that requires a cleaning mechanism. If the water had low
7 turbidity and low sediment movement, it may not require
8 cleaning.

9 I think the way the standard would be applied in this
10 case for something that is not -- it is a positive barrier
11 screen. It should have the same -- what I am saying, be
12 able to have the same performance as more typical positive
13 barrier fish screens.

14 MR. MINASIAN: Coming before the Board today, are you
15 aware that there was a lawsuit and that there was a judgment
16 of California Superior Court setting criteria for this
17 screen, either as a mechanical screen, metal or gabion, and
18 that this screen was tested after it was built and certified
19 as meeting that criteria specified by that court order?

20 MR. EDMONDSON: Was I aware of that court order? No.

21 MR. MINASIAN: Thank you.

22 Nothing further.

23 H.O. BROWN: Thank you, Mr. Minasian.

24 Mr. Gallery.

25 MR. GALLERY: No questions.

1 H.O. BROWN: Mr. Bezerra.

2 MR. BEZERRA: We have no questions for this witness.

3 H.O. BROWN: Mr. Morris.

4 MR. MORRIS: We have no questions.

5 H.O. BROWN: Mr. Cunningham.

6 MR. CUNNINGHAM: Sir.

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8 CROSS-EXAMINATION OF NATIONAL MARINE FISHERIES SERVICE

9 BY CALIFORNIA DEPARTMENT OF FISH AND GAME

10 BY MR. CUNNINGHAM

11 MR. CUNNINGHAM: Mr. Edmondson, Bill Cunningham. I am
12 representing the Department of Fish and Game.

13 If you will allow me, I would actually like to ask you
14 a couple of questions that I think in your complicated
15 effort to represent yourself have perhaps been overlooked.

16 And, Mr. Brown, with your permission I would like to
17 ask basic questions that we all address right at the start
18 of testimony. Perhaps, it is difficult when you are
19 testifying yourself to ask yourself those same questions, if
20 I might.

21 H.O. BROWN: I will allow that.

22 MR. CUNNINGHAM: Mr. Edmondson, when you testified
23 today, have you been testifying under oath?

24 MR. EDMONDSON: Yes, sir.

25 MR. CUNNINGHAM: Is the exhibit attached to your

1 materials that is identified as the testimony of Steven
2 Edmondson a true and correct copy of your testimony being
3 presented today?

4 MR. EDMONDSON: Yes, sir.

5 MR. CUNNINGHAM: Are the exhibits attached to your
6 testimony as well also true and correct copies as submitted?

7 MR. EDMONDSON: Yes.

8 MR. CUNNINGHAM: Is your statement of experience or
9 your resume as attached a true reflection of your
10 qualifications to appear as a witness today?

11 MR. EDMONDSON: Yes, it is.

12 MR. CUNNINGHAM: Thank you, Mr. Brown. I wanted to
13 help get that on the record for everybody.

14 Mr. Edmondson, since you have been testifying in the
15 cross-examination a variety of subjects have come up, so if
16 you bear with me I am going to try to follow some of those
17 subjects a little further to see if perhaps we can get a
18 little better understanding of some of the subjects.

19 If you would, I would like to go backwards from the
20 last discussion with Mr. Minasian where we were talking
21 about fish screens.

22 Mr. Edmondson, to your knowledge, does NMFS have any
23 specific screening criteria that recognized gabion or
24 leaking levee structures as effective fish screens?

25 MR. EDMONDSON: My understanding is that the criteria

1 does not address leaky levee, permeable dike-eaten weirs or
2 rock gabions.

3 MR. CUNNINGHAM: Do you know why?

4 MR. EDMONDSON: No, I don't.

5 MR. CUNNINGHAM: Also, kind of following backwards,
6 there was a long discussion, again aided by Mr. Minasian,
7 about outmigration and pulse flows. And I believe the
8 discussion in part dealt with this concept of a warm pulse
9 flow. I believe your testimony in cross-examination was
10 that you weren't familiar with any studies that focused on
11 both of those elements in one event.

12 Is there a problem trying to do a warm pulse flow,
13 physical problem, to your knowledge?

14 MR. EDMONDSON: Yes. There is a problem associated
15 with temperature shock, particularly with the juvenile
16 lifestages. They are more sensitive than the adult
17 lifestages to temperature shock. So, generally, extreme
18 differences in temperature can stress and sometimes cause
19 mortality directly or indirectly through direct mortality
20 through fish being washing downstream or through increased
21 predation.

22 MR. CUNNINGHAM: If I had the ability to generate pulse
23 flow in a river like the Yuba River, and I had been
24 maintaining a temperature up through my rearing period, a
25 temperature, let's say, hypothetically, 55 degrees, but

1 decided I wanted to send down a warm pulse flow and chose 60
2 degrees in a large pulse, would you be able to say that it
3 would have adverse effect on the fish that I would be trying
4 to aid in migration?

5 MR. EDMONDSON: Based on my experience, you are likely
6 to have an adverse effect.

7 MR. CUNNINGHAM: In fact, you essentially want to only
8 generate pulse flow after the fish have reached
9 outmigration; isn't that right?

10 MR. EDMONDSON: Yes. That is the concept behind pulse
11 flows.

12 MR. CUNNINGHAM: As you earlier testified, too, it is
13 hard to select a time for pulse flows because, in your
14 experience, salmonids can mature at varying rates and pulse
15 flows work best only when those fish mature in a very narrow
16 window of time, so you have the largest number of
17 correct-sized outmigrants to go with the pulse flow; is that
18 right?

19 MR. EDMONDSON: That's correct. The studies where I
20 have seen they work the best have been in relation to
21 hatchery releases.

22 MR. CUNNINGHAM: Why hatchery releases?

23 MR. EDMONDSON: Because the fish selected to mature at
24 the same rate, and they are generally more mature and larger
25 size when released to the system. So, essentially all the

1 fish are ready to move downstream at the same level of
2 maturity.

3 MR. CUNNINGHAM: From your experience, have you
4 encountered such a short, narrow bell curve of maturing fish
5 in a native population or a wild population?

6 MR. EDMONDSON: No, sir.

7 MR. CUNNINGHAM: Would it be fair to say, then, that to
8 the extent the Yuba River has no hatchery selection of fish
9 in that narrow window that a single pulse flow may not be
10 effective in aiding outmigration of salmonids on the Yuba
11 River?

12 MR. EDMONDSON: That's correct; it may not.

13 MR. CUNNINGHAM: Bear with me. I again have to read
14 some notes that people have been handing me.

15 Mr. Edmondson, are you familiar with the NMFS
16 biological opinion for a long-term operation of the Central
17 Valley Project and State Water Project?

18 MR. EDMONDSON: I have read through the document, I
19 couldn't recite it to you now.

20 MR. CUNNINGHAM: Are you familiar enough with it to
21 remember whether or not it sets any minimum flow, standards,
22 to avoid stranding or dewatering?

23 MR. EDMONDSON: Yes, it does. I believe so. I am
24 trying to remember. I read a lot of biological opinion
25 recently.

1 MR. CUNNINGHAM: I don't want to force what you
2 actually can recall. Do you remember it well enough to know
3 whether or not there was any temperature standard, for
4 example, like 56 degrees Fahrenheit included within that
5 opinion?

6 MR. EDMONDSON: My recollection is there was and I
7 worked on both ends of that opinion. Reviewed it when I
8 worked at the Bureau of Reclamation and then reviewed the
9 finished product when I came over to National Marine
10 Fisheries Service.

11 As I recall, there was a temperature standard; 56
12 sounds correct to me, but I don't recall the exact, explicit
13 temperature standard.

14 MR. CUNNINGHAM: Mr. Edmondson, that brings us back to
15 another area that had quite a bit of cross-examination; that
16 is, temperature criteria.

17 And I think earlier you testified that -- I believe you
18 said 54, a couple of degrees below 56, which is what you
19 would consider as an optimal temperature for salmonids. Is
20 that a fair statement?

21 MR. EDMONDSON: For salmonid spawning and rearing it
22 was 54 degrees, and that is based on the last two
23 recommendations contained in the reference section of
24 biological opinions that we issued for spring-run. They
25 both contain the number 54.

1 MR. CUNNINGHAM: Can you help me out by telling me what
2 you mean by the two periods of spawning and rearing? What
3 is the spawning event?

4 MR. EDMONDSON: The spawning events are when the mature
5 adults actually spawn in gravel, lay the eggs in the gravel,
6 and there is an ingravel form. Then there is an emerging
7 form and then for a period there is a -- the juveniles are
8 still in the area and they still need protection before they
9 outmigrate.

10 MR. CUNNINGHAM: What would be the rearing period of
11 time?

12 MR. EDMONDSON: The rearing period of time would be
13 post emergence of the fry.

14 MR. CUNNINGHAM: This would not be when they are
15 actually in the gravel, but after they emerge?

16 MR. EDMONDSON: Yes.

17 MR. CUNNINGHAM: During that period of time, it is your
18 understanding that 54 degrees would be the optimal
19 temperature?

20 MR. EDMONDSON: Correct.

21 MR. CUNNINGHAM: You said that there is the possibility
22 that too cold a temperature can be detrimental. When you
23 say too cold, are we talking about a couple degrees or are
24 we talking about something bigger than that?

25 MR. EDMONDSON: We are talking something larger than

1 that. As I recall, the lethal temperature for juveniles was
2 34 degrees.

3 MR. CUNNINGHAM: If I were to, say, take a sample flow
4 that was at 54 and -- 56 and lower it to 54, would you
5 expect to see any detrimental effects on spawning or rearing
6 of salmonids?

7 MR. EDMONDSON: If you went from 54 to 34?

8 MR. CUNNINGHAM: 56 to 54, a two-degree drop.

9 MR. EDMONDSON: No, I would not.

10 MR. CUNNINGHAM: 56 to 50?

11 MR. EDMONDSON: Probably not. I think 50 is still
12 within the range. There are various documents that
13 recommend optimum temperatures. And it is in range of upper
14 40s to about the mid-50s, in that range.

15 MR. CUNNINGHAM: What happens if I go the other way, it
16 I start going to go to warmer temperatures? Is the range as
17 broad? Can I go from 56 -- 54 to 34, 20 degrees
18 Fahrenheit? If I go from 54 to 74, would I see a similar
19 range of impacts on the fish or is it a little more
20 dramatic?

21 MR. EDMONDSON: It would be much more dramatic,
22 depending on how long you took to raise that temperature.
23 You can avoid some mortality by raising the temperature more
24 gradually. Generally, at about 58 degrees, and as I recall,
25 that was for all ingravel forms, including eggs and

1 nonemerging juveniles or sac fry, the lethal temperature was
2 about 58 degrees when we start seeing measurable mortality.

3 MR. CUNNINGHAM: If I were to get into the 60s, would I
4 see similar increase or a more dramatic increase?

5 MR. EDMONDSON: More dramatic increase.

6 MR. CUNNINGHAM: A question I had going all the way
7 back to the start of your own testimony. You talked, and I
8 notice in your testimony you spent several paragraphs
9 talking about consultation events that are currently taking
10 place, both with FERC and with Corps of Engineers.

11 But for my understanding and perhaps the understanding
12 of the Board, can you, since you are the first person who
13 has made any real references to these in your testimony, can
14 you tell me a little more about why NMFS is involved in a
15 consultation with the Corps of Engineers or initiating a
16 consultation with the Corps of Engineers on the Yuba River?

17 MR. EDMONDSON: NMFS is involved because the Corps of
18 Engineers' activities are federal actions on the Yuba River.
19 We believe may be surplus and may affect threshold. That is
20 a threshold of the Endangered Species Act requiring a
21 Section 7 consultation.

22 MR. CUNNINGHAM: Perhaps that's where I need to ask
23 you, what Corps activities? You make reference to them, but
24 you didn't say which Corps activity we are talking about.

25 MR. EDMONDSON: Corps activities would be direct,

1 indirect activities associated with the operation and
2 maintenance of Corps facilities on the Yuba River, as well
3 as Corps licenses which essential are licenses for
4 rights-of-way to make use of Corps facilities or to
5 transport water over Corps facilities. In that is included
6 the fish passage issues at Daguerre Point Dam, temperature
7 and flow issues at Englebright Dam and the issue of
8 unscreened diversions that are facilitated by the Corps
9 projects.

10 MR. CUNNINGHAM: So, it is your understanding that the
11 Corps itself is the operational entity for Daguerre and
12 Englebright Dam?

13 MR. EDMONDSON: The Corps is the operational entity or
14 shares that responsibility with Cal Fish and Game, is my
15 understanding. There is a cost share for operation of
16 Englebright Dam, according to the Corps of Engineers with
17 Cal Fish and Game. The Corps has ultimate responsibility
18 because it is a Corps facility for Daguerre Point Dam.

19 For Englebright Dam, the Corps owns that facility. It
20 is a Corps facility. The Federal Energy Regulatory
21 Commission has also issued licenses for operation of a large
22 development on Englebright Dam.

23 MR. CUNNINGHAM: That leads to my other question. You
24 made similar references to consultation with FERC on some
25 Yuba River events, but you don't state in your own testimony

1 exactly which FERC permitted events or FERC permitted events
2 are being discussed.

3 Do you have any information to help us out
4 understanding what are the FERC permitted activities on the
5 Yuba River?

6 MR. EDMONDSON: What we are referring to there are
7 actually two consultations. One sort of a larger or
8 umbrella consultation for FERC's retained discretionary
9 authority over its licensees for operations in the Yuba
10 River. And that includes impacts to salmonids associated
11 with the impoundment and release of flows from FERC
12 projects, facilitation of flows to unscreened diversions,
13 impacts associated in inadequate ramping rates, et
14 cetera.

15 There is also a consultation over this summer with the
16 Federal Energy Regulatory Commission on short-term projects
17 for on rewind at the Narrows Hydroelectric Project.

18 MR. CUNNINGHAM: Does -- I saw in your testimony that
19 the Yuba County Water Agency, among others, is involved in
20 at least the FERC consultation process. Can you provide me
21 any help in understanding how they are involved in that
22 consultation process?

23 MR. EDMONDSON: Yuba County Water Agency under both
24 consultations was named by FERC as a nonfederal
25 representative. In its provision under the Endangered

1 Species Act, where a federal action agency can name the
2 applicant, in this case Yuba County Water Agency, to
3 actually work with the National Marine Fisheries Service in
4 the preparation of a biological assessment. We work
5 directly with or -- during the short-term consultation on
6 rewind, we worked directly with Yuba County Water Agency and
7 in some cases on an almost daily basis with rewind, and that
8 was associated with the take to list salmonids that occurred
9 as a result of the rewind operation, the ramping that
10 occurred to facilitate the rewind.

11 MR. CUNNINGHAM: NMFS actually looked at the ramping
12 event that took place during the consultation on the rewind
13 project?

14 MR. EDMONDSON: Yes, we did. We had field evidence
15 that insufficient ramping rates resulted in mortality to
16 listed salmonids.

17 MR. CUNNINGHAM: That is in the Yuba River?

18 MR. EDMONDSON: In the Yuba River.

19 MR. CUNNINGHAM: Can you elaborate on that? What did
20 you actually find on the ramping rates and their
21 detrimental effects on salmonids in the Yuba River?

22 MR. EDMONDSON: What occurred there in that particular
23 instance was that Yuba County apparently had been drafting
24 down some of its storage in the system and was releasing
25 unusual low flows in the summer. In order to facility the

1 ramping, the flows were to be reduced dramatically for
2 purposes of conducting the rewind operations.

3 So flows went from a high of, I believe, somewhere
4 around 2000 cfs and were due to be dropped to something on
5 the order of 1200 cfs, as I recall. In an interim period at
6 around 700 cfs or -- actually higher than that. I'm trying
7 to remember the exact point that we started noticing
8 mortality. It was fairly high flows. The issue was when
9 you raise the river high, particularly when you have
10 juveniles, the juveniles tend to move to the margin of the
11 river channel, to the low, flat areas.

12 So once the juveniles have moved to the low, flat
13 areas, once you drop the flow, they tend to remain in those
14 pools or in the shallow spots. They become isolated and
15 succumb to mortality either from desiccation from
16 temperature and most likely from predation. I think in the
17 case of Yuba River we were noting juveniles in pools that
18 were becoming isolated. The next day after the next ramping
19 step, the juveniles were completely gone. Likely that they
20 were succumbed to predation.

21 MR. CUNNINGHAM: To the extent the Yuba County Water
22 Agency or several other parties I think you identified are
23 involved in this FERC consultation process, are they bound
24 by any of the understandings that are reached through the
25 consultation event?

1 MR. EDMONDSON: Once we go through a complete
2 consultation process and we end up with -- we end up as we
3 discussed earlier with a nonjeopardy order or jeopardy
4 biological opinion, if we go to a formal consultation.

5 In a nonjeopardy biological opinion there are terms and
6 conditions that are nondiscretionary that the National
7 Marine Fisheries Service can add to a biological condition
8 and make it a condition of the incidental take. The Agency
9 is bound by those terms and conditions.

10 MR. CUNNINGHAM: In this context on these FERC
11 permitted events, Yuba County Water Agency would be bound by
12 those terms as well?

13 MR. EDMONDSON: Yes.

14 MR. CUNNINGHAM: Do you have any idea -- as I
15 understand it now, the FERC consultations have been in
16 process for some period of time. Do you have any idea when
17 you can expect an actual resolution on that consultation
18 event or series of events?

19 MR. EDMONDSON: Actually we are hoping to have a
20 meeting soon with the designated nonfederal reps and
21 identify a schedule. We have not yet identified a schedule.

22 MR. CUNNINGHAM: As I understand it, the Corps of
23 Engineers consultation is quite a bit behind that, as well.
24 You just barely initiated the contact?

25 MR. EDMONDSON: Right. We are hoping to combine the

1 two, have more of a watershed approach among the Corps and
2 the FERC. This is preliminary, but that is the kind of
3 direction I am hoping that these two consultations move in,
4 kind of as one.

5 MR. CUNNINGHAM: Kind of a last question, Mr.
6 Edmondson.

7 The concept of a net benefit I believe -- again this
8 was opened up early in cross-examination of you, with a
9 discussion about how the cold flows coming out of New
10 Bullards Bar and the larger summer flows had somewhat
11 provided a net benefit to salmonid fisheries in the Lower
12 Yuba River.

13 Do you have any -- do you know of any study that has
14 actually established the existence of such net benefits to
15 salmonids in the Lower Yuba River?

16 MR. LILLY: I will object. It misstates his prior
17 testimony. He did not say there somehow might be net
18 benefits. His testimony was that there would be benefits
19 through the higher flows and lower temperatures.

20 H.O. BROWN: Perhaps you can restate.

21 MR. CUNNINGHAM: I will just accept the qualification
22 Mr. Lilly put in. To the extent we are arguing that --

23 H.O. BROWN: You are --

24 MR. CUNNINGHAM: Let me start over again.

25 Mr. Edmondson, did you earlier testify that the cold

1 water flows available from New Bullards Bar and increased
2 volumes off flows in the summer does provide a net benefit
3 to salmonids in the Lower Yuba River?

4 MR. EDMONDSON: If I am not mistaken, I said it was in
5 the hypothetical, that would be the case. But it is
6 depending on a number of factors, including the duration of
7 those flows and temperatures are available to fish. Again,
8 that goes back to the issue of temperature and flow within a
9 preferable range for a short period of time is no benefit at
10 all to the population.

11 There are other issues associated with the Yuba River
12 besides just temperature and flow. For instance, discussing
13 net benefits, there are also losses associated with
14 unscreened diversions. You may produce more fish, but then
15 again you have greater losses at unscreened diversions.

16 It is easy to answer on a hypothetical. In the real
17 word, as you said, I am not aware of any published documents
18 that describe a net benefit to the salmonids. There may be,
19 but I am not aware.

20 MR. CUNNINGHAM: I will call it quits right there.

21 Thank you, Mr. Brown.

22 H.O. BROWN: Thank you.

23 MR. CUNNINGHAM: Thank you, Mr. Edmondson.

24 H.O. BROWN: Thank you, Mr. Cunningham.

25 Staff -- wait, Mr. Sandino.

1 temperature.

2 You don't have a recommendation at this time on what
3 these temperatures represent?

4 MR. EDMONDSON: I would like to review more of the data
5 before I give a response to that. Just off the cuff I would
6 say mean daily, but I would want to review the data before I
7 give you a hard-and-fast recommendation.

8 MS. LOW: Thank you very much.

9 H.O. BROWN: Mr. Edmondson, do you have any redirect?

10 MR. FRINK: Mr. Brown, I do have some other questions.

11 MR. MONA: I have a few also.

12 MR. FRINK: I will get my own out of the way first.

13 Mr. Edmondson, your resume indicates that you were a
14 biologist for FERC from 1989 to 1997. Did you do any work
15 on the Yuba River during that period?

16 MR. EDMONDSON: I didn't do any major work on the Yuba
17 River. I don't have recollection of a specific project. If
18 I did a major IFIM or major Commission order or rehearing
19 request, I would have recollection of it.

20 MR. FRINK: You weren't involved with the establishment
21 of the higher instream flow requirements that FERC adopted
22 in the early 1990s?

23 MR. EDMONDSON: No, I was not.

24 I have some questions about the gabion fish screen that
25 Mr. Minasian was asking you about. Should the approach

1 channel to a fish screen be considered when evaluating the
2 overall efficiency of a fish screen of a water diversion
3 facility?

4 MR. EDMONDSON: Absolutely.

5 MR. FRINK: And in the case of the gabion fish screen
6 that is depicted in Mr. Minasian's schematic diagram, would
7 you be considered about -- would you be concerned about the
8 velocity of water flowing in and the velocity of water
9 flowing out of the diversion ponds across which the gabion
10 is constructed?

11 MR. EDMONDSON: Those are components of the performance
12 of the fish barrier, so yes.

13 MR. FRINK: How would a slow velocity in the approach
14 channel or the return channel affect the fish or would it
15 have any effect if the velocity were very slow?

16 MR. EDMONDSON: Again, I am having a difficult time
17 with the schematic. Maybe I should speak in more general
18 terms.

19 MR. FRINK: Okay.

20 MR. EDMONDSON: The issue is the flow past the screen
21 or diversion facility or the barrier. There are two issues
22 of flow; one is the flow past a diversion facility and the
23 other is flow through that diversion barrier. If the flow
24 through the diversion is too high, then fish become impinged
25 on the barrier and mortality that way.

1 There is also an issue of flow past the diversion
2 facility. In other words, the flow should be such that fish
3 are not impinged and also they have an opportunity to move
4 past the screen or positive barrier.

5 MR. FRINK: Have you heard there have been any problems
6 resulting at the gabion fish screen as a result of slow
7 movement of water on downstream or past the fish screen?

8 MR. EDMONDSON: I am not very familiar with the
9 specifics of the gabion.

10 MR. FRINK: If the height of the gabion fish screen
11 were increased, would that reduce the problem of fish going
12 over the gabion during floods or extremely high flows?

13 MR. EDMONDSON: It should reduce that component of
14 entrainment.

15 MR. FRINK: Assuming that the gabion fish screen were
16 to remain in place, would you be concerned about taking
17 actions to ensure that the flow into and out of the pond
18 adjoining the gabion moves a relatively stable velocity
19 approaching the velocity of the river?

20 MR. EDMONDSON: I guess you're alluding to how long the
21 fish stay in the channel, moving them back as return back to
22 the river?

23 MR. FRINK: Would you be concerned if the fish stayed
24 in the pond across which the gabion is constructed for a
25 long period of time?

1 MR. EDMONDSON: Absolutely I would. Issues mostly
2 associated with water temperature and predation and fish
3 being retained in that pond. Yes, I would.

4 MR. FRINK: Could you reduce those problems if you
5 increased the rate of flow through the pond in which the
6 gabion is located?

7 MR. EDMONDSON: Yes.

8 MR. FRINK: Would NMFS staff be available to
9 participate in a joint evaluation process with other
10 agencies on methods of improving fish screening facilities
11 in the area of the rock gabion?

12 MR. EDMONDSON: Absolutely, yes, sir.

13 MR. FRINK: One other question.

14 You testified about the change in flows in the Yuba
15 River during what I believe you referred to as the rewind
16 operation; is that correct?

17 MR. EDMONDSON: Yes. There is a part of a schedule or
18 routine maintenance on the generator, the generator for the
19 Narrows Hydrologic Project. It was due to be rewound. In
20 other words, the copper windings are removed and new
21 windings are put on.

22 MR. FRINK: Did that entail substantial change in flows
23 in the Lower Yuba River?

24 MR. EDMONDSON: Yes, sir.

25 MR. FRINK: That is all I have.

1 MR. MONA: Just one question.

2 On your written testimony, Page 7, Paragraph D, you
3 recommend the need for a study of the time the smolts
4 emigration and flow you need for period April 1 through June
5 30th.

6 Who are you suggesting conduct the study? The Agency?
7 FERC? The Board?

8 MR. EDMONDSON: I suggest or my recommendation is that
9 the requirement to conduct that study may be made a term and
10 condition of the water right.

11 MR. MONA: The Agency?

12 MR. EDMONDSON: Right.

13 MR. MONA: Thank you.

14 H.O. BROWN: Mr. Edmondson, do you have any redirect
15 you wish to add?

16 MR. EDMONDSON: No, sir, I do not.

17 H.O. BROWN: No redirect, there will be no recross.

18 MR. LILLY: Excuse me, Mr. Brown.

19 Your normal procedure is that if the lawyer who follows
20 us in the order asks questions that raise other issues, we
21 do have an opportunity to ask follow-up questions to that,
22 and I do have some follow-up questions following up on Mr.
23 Cunningham's cross-examination.

24 H.O. BROWN: Mr. Frink, did I state my position
25 correctly?

1 MR. FRINK: I think the procedure has varied. I think
2 it is within the discretion of the Chair. If there were new
3 issues covered as a result of the cross-examination, it may
4 be appropriate to allow some further cross-examination. But
5 it is within the discretion of the Chair.

6 H.O. BROWN: Mr. Baiocchi.

7 MR. BAIOCCHI: If you allow recross, I was reminding
8 you first in line.

9 H.O. BROWN: The Chair, if there is no redirect in this
10 hearing, would not allow recross. We will go with that.

11 MR. LILLY: Just so the record is clear, Mr. Brown, I
12 want you to know I consider this to be a denial of due
13 process rights.

14 H.O. BROWN: It is so noted, Mr. Lilly.

15 MR. LILLY: Thank you.

16 H.O. BROWN: If there is any further -- I think we are
17 going to try to close about five to four each afternoon and
18 I think that, Mr. Gee, instead of start your direct, we will
19 start first thing in the morning if that is all right with
20 you.

21 MR. GEE: It is fine, Mr. Brown.

22 H.O. BROWN: We are adjourned until 9:00 --

23 MR. FRINK: There is one other housekeeping matter. I
24 believe Mr. Edmondson wished to move his exhibits into
25 evidence.

1 MR. EDMONDSON: I am sorry.

2 H.O. BROWN: Thank you, Mr. Frink.

3 MR. FRINK: We are talking about the S-NMFS-1 to
4 S-NMFS-12.

5 MR. EDMONDSON: Yes, I would like to have those moved
6 into evidence.

7 H.O. BROWN: If there is no objections to the admission
8 of those exhibits --

9 MR. LILLY: We have some objections, Mr. Brown.

10 H.O. BROWN: All right.

11 Which one, Mr. Lilly?

12 MR. LILLY: First of all, I think it was just an
13 oversight, but at least our copy of Exhibit S-NMFS-2, Page
14 197 was missing. We just ask that Mr. Edmondson provide
15 copies of that to the Board and to the interested parties so
16 we have a complete copy of that exhibit. I am sure that was
17 just an oversight.

18 MR. EDMONDSON: S-NMFS-2?

19 MR. LILLY: Yes, Page 197. I assume you can do that if
20 you find the original.

21 As far as Exhibits S-NMFS-2 through 9, those are
22 hearsay. Mr. Edmondson was not listed as the author of any
23 of those exhibits and, therefore, they cannot be considered
24 as his testimony. If they are accepted into evidence, we
25 ask that they be accepted subject to the limitations in

1 Government Code Section 11513 on the use of hearsay
2 evidence.

3 Furthermore, subject to that limitation we understand
4 that these documents can be admitted into the record for
5 background information. However, we object to their use for
6 any broader purpose because they do not have bearing on
7 issues the State Water Resources Control Board is going to
8 be deciding in this hearing. Basically, certainly, the
9 federal Endangered Species Act can be very relevant to
10 actions by federal regulatory agencies like FERC, as Mr.
11 Edmondson has explained. But the State Water Board has
12 different legal standards that it is going to apply and
13 those legal standards will be the same whether or not these
14 species are listed under the federal Endangered Species
15 Act.

16 H.O. BROWN: Mr. Edmondson, any comments on that?

17 Mr. Frink, any comments?

18 Let me hear from Mr. Baiocchi first.

19 MR. BAIOCCHI: Mr. Brown, they should be admitted. I
20 mean, that is part of the public records, you know. The
21 information he has in there is public information. It
22 should be part of the record.

23 However, if it is going to be -- if it is going to be
24 not admitted in the record, then we object to it and we will
25 move forward with this, with the exhibit issue, later on in

1 the hearing.

2 Thank you.

3 H.O. BROWN: Thank you, Mr. Baiocchi.

4 Mr. Sanders.

5 MR. SANDERS: Being that Mr. Edmondson is not an
6 attorney, and I don't presume to speak for him, I would like
7 to point out that I believe your rules do allow you to take
8 judicial notice of at least some of these exhibits. The
9 Federal Register, any exhibit that is published in the
10 Federal Register, we request that you take judicial notice
11 of that. It is a publicly available document. Likewise, I
12 believe, again I might be stepping out on a limb here, but I
13 believe that the other exhibits, the status reviews, et
14 cetera, would also fit within your judicial notice
15 regulations and, therefore, you should accept them into
16 evidence. You should notice them and accept them into
17 evidence on that basis.

18 Thank you.

19 H.O. BROWN: Thank you, Mr. Sanders.

20 MR. CUNNINGHAM: Mr. Brown, if I might.

21 H.O. BROWN: Yes, sir.

22 MR. CUNNINGHAM: I thought I would wait until you said
23 yes.

24 H.O. BROWN: Mr. Cunningham, go ahead.

25 MR. CUNNINGHAM: Whether you call it judicial notice or

1 official notice, under Government Code Section 115,
2 probably, 15, I do believe that you can take official notice
3 of documents generated by official bodies or agencies or
4 federal or state government. Almost all the documents,
5 exhibits, are governments and are referred to as such and
6 fall into that class. So to the extent those are available,
7 they are available as potential exhibits for purposes of
8 perhaps of hearsay but are themselves recognizable for the
9 substance contained within it as well.

10 I have one additional clarification point for staff.
11 In looking at my numbering of Mr. Edmondson's exhibits, is
12 his testimony numbered at all, actual written testimony?

13 MR. MONA: Yes. It was submitted to the Board
14 unnumbered, so staff numbered it as S-NMFS-1A.

15 MR. CUNNINGHAM: My understanding is that the
16 consideration before you rightfully is for all of the
17 exhibits, including 1A?

18 MR. EDMONDSON: Correct.

19 H.O. BROWN: Thank you, Mr. Cunningham.

20 Mr. Frink.

21 MR. FRINK: Yes, Mr. Brown.

22 I would say that the issue of classification of species
23 under federal Endangered Species Act is relevant to an
24 action the Board may take. In the Board's initial hearing
25 notice it was described as the Board may amend the permits

1 or licenses of water rights, but also mentioned other
2 actions that the Board might want to take, and the Board
3 does have responsibilities before FERC. So, certainly, the
4 classification of the Endangered Species Act is a relevant
5 issue.

6 I would agree that most of the reports identified by
7 Mr. Edmondson are governmental reports, and they are
8 entitled to admission under our regulations. If Mr. Lilly
9 has a specific objection to a particular report, maybe we
10 can hear that. But I wouldn't want to just state at the
11 outset that all of those reports would be regarded as
12 hearsay.

13 H.O. BROWN: Thank you, Mr. Frink.

14 Mr. Lilly.

15 MR. LILLY: We stand by our objection, we are not
16 objecting to having them received into the record. But
17 whether they are subject to official notice or not, they
18 still are hearsay and still are subject to the limitations
19 on the use of hearsay evidence as specified in the
20 Government Code.

21 H.O. BROWN: Mr. Lilly, your objections and concerns
22 are duly noted. The Board will take notice of that.

23 On that basis, the exhibits are admitted into
24 evidence.

25 There being no further business --

1 MR. LILLY: I have one housekeeping matter. We found a
2 glitch in one of our computer codes and have prepared some
3 exhibits which modify a couple of the graphs in the prior
4 exhibits. I just want to distribute those today so the
5 parties would have a chance to receive them before our
6 witnesses actually testify. So I have six copies of
7 Exhibit S-YCWA-16B which has some minor corrections on 16A
8 and also to the S-YCWA-19A which has some revisions to
9 Exhibit 19. I will submit those to staff this afternoon and
10 provide copies for all interested parties.

11 H.O. BROWN: You have copies to hand out this
12 afternoon?

13 MR. LILLY: Yes. Of course, the issues of
14 admissibility can be assessed when our witnesses actually
15 testify.

16 One other very important matter, one of our witnesses,
17 Bill Mitchell, will not be available during the second week
18 of the hearing. And the way the schedule is going now, it
19 looks like we would be able to put our case on during the
20 first week and have complete cross-examination of witnesses,
21 including Mr. Mitchell. However, after all the parties have
22 put on their cases we may need to put on rebuttal evidence.
23 And, therefore, Mr. Mitchell would be a critical part of
24 that and would not be available during the second week of
25 the hearing for that.

1 We request that the Board be willing to schedule an
2 additional, probably, just an hour or two hearing, if
3 necessary, after the second week of scheduled days of the
4 hearing to facilitate Mr. Mitchell. He had preexisting
5 plans to travel out of the country for that second week of
6 the hearing. Just as the Board accommodated John Nelson
7 from Fish and Game, a preexisting plan to be gone the first
8 week, we ask that the Board accommodate Mr. Mitchell's
9 schedule regarding that second week.

10 H.O. BROWN: He will be here within the days scheduled
11 for the hearing?

12 MR. LILLY: He will be here tomorrow, Thursday and
13 Friday. Then you have a week off and the following week you
14 have Monday, Tuesday and Thursday, and he will be out of the
15 country on those three days.

16 H.O. BROWN: You want to catch him before he leaves?

17 MR. LILLY: Catch him before he leaves, but more
18 important I am asking the Board to agree to schedule an
19 additional day of hearing after the seven scheduled days,
20 probably just a short portion of a day of hearing to allow
21 Mr. Mitchell to present any rebuttal evidence that may be
22 necessary after the parties have put on their cases.

23 H.O. BROWN: I have concerns, is that if we all through
24 within the days that are scheduled, can you put on -- you're
25 talking rebuttal evidence?

1 MR. LILLY: That is all it will be. I expect at most
2 probably an hour, probably more like half an hour. Of
3 course, if the Board finishes earlier during those seven
4 scheduled days, the total time would not be different, just
5 to allow -- to accommodate his schedule to allow an
6 additional short period of hearing during the subsequent
7 week.

8 MR. FRINK: Mr. Brown.

9 H.O. BROWN: Mr. Frink.

10 MR. FRINK: I believe any of the evidence that Mr.
11 Mitchell would be speaking in rebuttal will have been
12 presented at the time he presents his direct. So perhaps he
13 could go ahead and address that. All the other parties'
14 exhibits are in and I know that it is not desirable to mix
15 the direct and rebuttal, but perhaps in this case you can
16 make a limited exception. And if there is something Mr.
17 Mitchell feels he needs to address on rebuttal, he can do so
18 this week.

19 MR. LILLY: The problem, Mr. Frink, is you have allowed
20 Fish and Game to go at the end. Their evidence would not be
21 in the record at that time. That would be the major type of
22 evidence that he would be providing rebuttal to.

23 MR. FRINK: Fish and Game exhibits were submitted in
24 advance of the hearing. Their testimony is to be a brief
25 oral summary of what they already put in. And in terms of

1 accommodating the order of presentations, we did accommodate
2 the request by Fish and Game. We also have accommodated the
3 request of some of the agencies within Yuba County in
4 working out the schedule. We have not scheduled additional
5 hearing days. It may well be that we are not done with this
6 thing anyway at the end of seven days.

7 At this point I would be hesitant to commit to
8 scheduling additional days if the Board, in fact, is done.

9 H.O. BROWN: I will rule on that in the morning. But
10 right now I am not apt to schedule additional hearing days.
11 If that is all we are lacking, Mr. Lilly, try to figure
12 something out, if you can.

13 MR. LILLY: We will wait to hear the ruling.

14 H.O. BROWN: We are adjourned until 9:00 in the
15 morning.

16 (Hearing adjourned at 4:00 p.m.)

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